

American Aviation

25c



The News Magazine of Air Transportation

Dec. 15, 1947

Matches Start Fires

THE HISTORY of organized labor is the history of battling for collective bargaining, living wages and for such progressive gains as the orderly handling of grievances. It is estimated that at least 99% of all unions today insist upon the inclusion in all contracts of a section relating to grievance procedures.

Early this month the pilots of United Air Lines began taking a strike vote and the issue was over the inclusion in the new contract of a section for the orderly handling of grievances. Incredibly enough, however, it is the labor side

which doesn't want the grievance procedures included.

The new contract has been under negotiation for 15 months. Every other single point—pay, terrain allowances, seniority—all were settled. And now, because the Air Line Pilots Association demands the exclusion of a simple type of grievance procedure to be found in virtually every union contract in the nation, the ALPA leadership apparently is perfectly willing to call a strike which will ruin the company financially, throw 9,500 employees out of work, and stab in the back the airline management that has consistently taken the most progressive and forward steps on behalf of its employees.

ALPA's president, Dave Behncke, has an answer. He told our *American Aviation Daily* that the company suggested the section at a late date and thus it was out of order. He said the company was adding "something new" to the negotiations.

For one thing, the company certainly is deserving of whatever protection is afforded by the grievance section in view of Behncke's unpredictable past actions. For another thing, a contract is never a contract until it is ready for signature and "something new" can always be brought in. Thirdly, it is rather indefensible that ALPA can oppose a simple, clear-cut set of procedures on handling grievances when these are virtually standard in union contracts.

What does Behncke really want? What is he really after? It can't be that his whole defense is that the company is out of order. One doesn't ruin a company financially on such a childish pretext. On the other hand, there is no certainty that a strike will be called; old Dave has protected himself with

(Turn to page 8)



Heads Northeast Airlines

George E. Gardner, veteran air transport executive experienced in military, governmental, and commercial aviation, was recently elected president and chief executive officer of Northeast Airlines. Closely identified with aviation since 1928, he was formerly with Eastern, Northwest, and National. He had resigned as executive vice president of National last March to organize his aviation consultant firm in Miami.

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REFERENCE COPY

Pilot Strikes Threaten

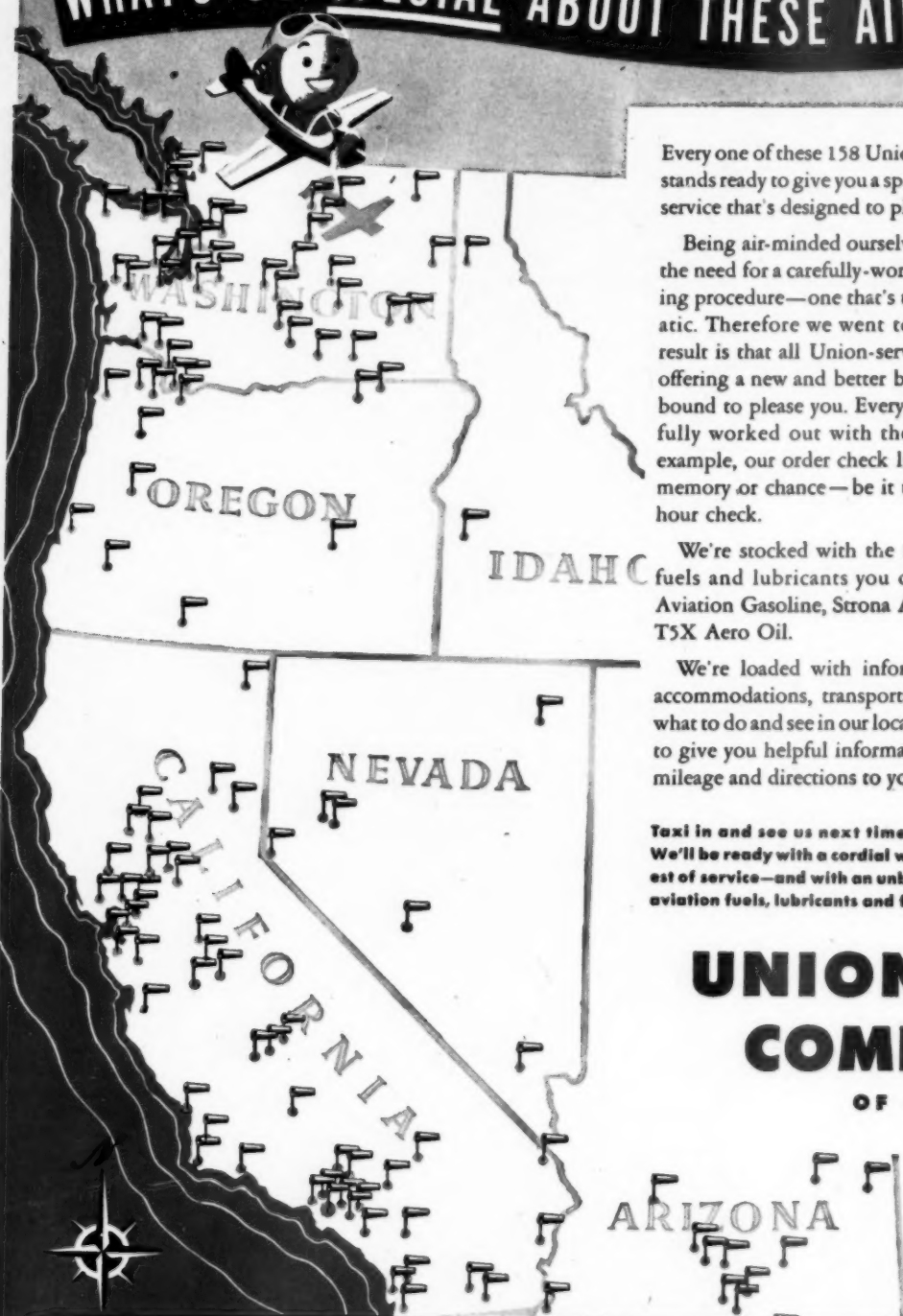
United, National 16

MANAGEMENT

SALES

OPERATIONS

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Maria, San Marcos, Stockton, Vallejo, Van Nuys, Victorville, Visalia, Williams, Willows, Woodland.

NEVADA—Fallon (2), Minden, Las Vegas, Tonopah, Wells.

OREGON—Beaverton, Burns, Eugene, Hillsboro, Klamath Falls, North Bend, Pendleton, Riddle, Salem, Troutdale, Weston.

IDAHO—Boise, Coeur d'Alene (2).

WASHINGTON—Auburn, Bellevue, Bellingham, Bremerton, Camas, Chehalis (2), Cle Elum, Colville, Ellensburg, Enumclaw, Everett, Forks, Friday Harbor, Hoquiam, Kennewick, Lacrosse, Longview (2), Montesano, Omak-Malott, Orcas

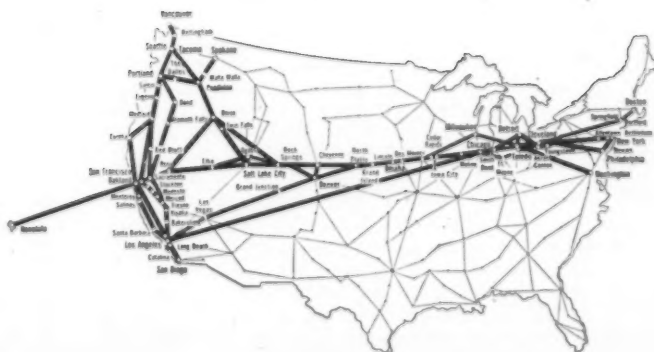
Island, Olympia, Port Angeles, Port Orchard, Prosser, Puyallup, Renton, Seattle (5), Sequim, Shelton, Snohomish, Spokane (3), Tacoma (3), Toppenish, Twisp, Vancouver, Washburn, Woodland, Wenatchee, Yakima (2).

HAWAII—Honolulu.

ALASKA—Anchorage (2), Fairbanks (2), Juneau (2).



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—FORTNIGHTLY REVIEW—

* * * *

Airline insurance firms are in for heavy financial losses this year, according to William E. Blain, executive underwriter of Aero Insurance Underwriters. Loss payments are expected to exceed gross premium income by between \$5-\$9 million. (Page 13)

Both United Air Lines and National Airlines are faced with possibility of shutdown through pilot strikes threatened over grievance issues. After 15 months of negotiations for a new contract, and with every point settled except that involving the handling of grievance cases, the pilots broke off their meetings with UAL late in November and a strike vote was underway. The NAL dispute involves a pilot discharged in 1945 following an accident. (Page 16).

R. D. Stewart, commercial director of British Overseas Airways Corp. and retiring chairman of the IATA Traffic Committee, reviews accomplishments of the IATA group during the past year. (Page 21)

Despite the obvious economic and service advantages of proposed designs, no firm plans exist for introduction of any new cargo plane. R. Dixon Speas and John J. Casey, of American Airlines, told the recent SAE air transport engineering meeting in Kansas City early this month. (Page 27)

In an effort to reduce unnecessary delays which add up to delayed flight schedules, Eastern Air Lines has adopted new passenger loading procedures at the 78 route points on its system. (Page 39)

How deeply depreciation charges are cutting into airline revenues is shown by a study which reveals that such charges for domestic lines are up nearly 300% this year, compared with 1945. (Page 44)

Air Mail Inquiry Opens

Representatives of non-certificated airlines were first witnesses slated to appear before a special subcommittee of the House Post Office and Civil Service Committee when it opened its inquiry into air mail, Dec. 10. It was intended to open the hearing with government witnesses Dec. 8, but when postponement was necessary, West Coast representatives of non-certificated carriers were allowed to follow their original schedule and appear on the 10th, before government and airline representatives.

Department of Transportation Proposed

Identical bills providing for creation of a new Department of Transportation which would be given jurisdiction over Civil Aeronautics Board and Civil Aeronautics Administration, as well as other transportation agencies, have been introduced by Sen. Homer E. Capehart (R., Ind.) and Rep. Karl Stefan (R., Neb.). The department would be headed by a Secretary of Transportation, of cabinet rank. Rule making, rates, and regulations would be handled by each agency independent of the Secretary. Sen. Capehart indicated that the bills had not been seen nor endorsed by any transportation group, including the Transportation Association of America which last year succeeded in getting a House committee to make a \$35,000 investigation of all forms of transportation with the idea of integration. Early hearings are being asked on these bills.

Forrestal Bars Competition with Airlines

Secretary of Defense Forrestal has issued an order establishing joint policy on transportation by naval and military aircraft, emphasizing that the military services should not compete with commercial airlines. The directive, which formalizes practices already set up by the services through verbal understanding declared: "As

(Turn to Page 6)

AMERICAN AVIATION

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WAYNE W. PARRISH

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This is no pleasure jaunt. What you see is a Boeing test-flight crew taking one of the new Stratocruisers up for another proving flight. In scores of such tests they've already affirmed the smooth-flying, easy-handling performance of the big plane.

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Again, it may be a speed check on the twin-deck giant's 340-mile-an-hour cruising speed. Or it may be for various mechanical tests on the four 3500-horsepower engines which make the Stratocruiser the most powerful transport ever to take to the skies.

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BOEING
STRATOCRUISER

FORTNIGHTLY REVIEW

(Continued from page 4)

a general policy the aviation organization of the armed forces shall not be placed in a position of competing with United States commercial air transportation. Therefore, in no case will air transportation be provided on any given route if the Civil Aeronautics Board certifies that, in its opinion, United States civil air carriers adequate to handle such traffic are in operation on that route." The order (1) Permits the armed services to provide air transportation without charging for it where it is the "official concern" of the service; (2) Permits air transportation for other government departments and agencies when paid for; (3) Permits armed services to carry civilian passengers on urgent missions only when this does not compete with commercial airlines.

Russian Air Force Double U. S.

Russia has 14,000 first line combat planes, twice as many as the U. S. will have under its proposed 70 air group program, Jan. 1, 1949, Gen. Carl Spaatz, Air Force Chief of Staff, told the President's Air Policy Commission. He estimated that the Russians could produce between 500 and 1,000 B-29's in the next six months if they so desired, the Superforts being patterned after two interned in Russian territory during the war. Spaatz outlined this country's AF requirements under the 70 air group program as 8,869 planes in the regular force, 3,212 in National Guard, 2,360 in the Reserve. These should be backed up by 8,100 planes in "moth balls and storage". To keep the force modern, he said 3,200 new aircraft should be procured annually.

Names in the News:

C. Bedell Monro, former president of Capital Airlines, and **Richard E. Fell**, former regional v.p. of the airline, have formed three new companies with offices in the Du Pont Circle Bldg., Washington, D. C. The companies are: World Trade Service, Inc., Field Service, Inc., and United Service Associates, Inc. Fell is v.p. and Monro secretary of all three companies, and Monro is president of United Service Associates. Activities will include management consultation, sales brokerage, and foreign trade representation, with most activities outside the field of aviation . . . **Dwane L. Wallace**, president of Cessna Aircraft Co., has been elected chairman of the Personal Aircraft Council, Aircraft Industries Association, and **William H. Klenke**, general sales manager of Stinson Division, Consolidated Vultee Aircraft Corp., was named vice chairman . . . **Glenn L. Martin** has announced he will sell the Glen Mar Farms produce house at Chestertown, Md., ending a 15-month experiment in delivering fresh vegetables to market by air.

Notes in the News:

The Air Force has increased by \$1,070,000 its commitments with **Ryan Aeronautical Co.** for development and manufacture of a new type guided missile weapon. This is third AF contract boost with Ryan, establishing the company as a leader in this new field . . . **Shipments of complete aircraft** to other than U. S. military customers during September totaled 1,028, valued at \$20,700,000, an increase of 11% in number and 29% in value over 929 planes valued at \$16,100,000 reported for August . . . **The National Airport Show and Institute** of Cleveland is conducting a survey to determine whether the show and institute, scheduled for Cleveland last Nov. 4-7 but postponed, should be convened at a future date . . . With initial test flights successfully completed on prototype of the Doman helicopter rotor system, **Doman-Frasier Helicopters, Inc.** has moved from Stratford, Conn., to larger facilities on the Danbury, Conn., municipal airport. In addition to the military contract on which it

has been working, the company has plans for development of a large helicopter rotor head capable of application to transport size craft . . . A group of industrial executives have organized the **Corporation Aircraft Owners Association** to promote aviation interests of industrial and business firms which operate private planes for passenger and freight service. **W. B. Belden**, Republic Steel Corp., Cleveland, is chairman of the board, **P. J. Lathrop**, Bristol-Myers Co., Hillside, N. J., secretary-treasurer . . . **Cessna Aircraft Co.'s** new Model 170 four-place craft is undergoing flight tests. The model, powered by a Continental 145 hp engine, will be priced at \$5,475, f.a.f. Wichita, with deliveries to begin in March.

International

Work Abandoned on Concordia Feeder Plane

Cunliffe-Owen Aircraft Ltd., Southampton, Eng., abandoned work on the company's twin-engined 10-place Concordia feeder liner and dismissed about 400 employees. Cunliffe-Owen was formed early in 1938 by Sir Hugo Cunliffe-Owen for development of flying wing aircraft under American Burnelli patents. Restrictions on foreign currency and import licenses prevented sales. The company, after spending about \$2,000,000 on the prospect, decided there would not be sufficient sales to justify production under present world conditions.

BEA Reduces Viking Order

Because of the "curtailment of air activities due to the general economic crisis," British European Airways Corp. has reduced its order for Vickers Mark I B Vikings from 50 to 35, according to the Ministry of Supply.

Colombia, Pakistan Join ICAO

Colombia became a member of the International Civil Aviation Organization on Nov. 30, and Pakistan on Dec. 10, increasing ICAO membership to 45.

Second ICAO Assembly Set For June 1

The Second Assembly of the International Civil Aviation Organization will be held at the Palais des Nations in Geneva, beginning on June 1, 1948, and is expected to last about three weeks.

ABA-SILA Merger Formally Recommended

Merger of A. B. Aerotransport, Swedish airline 88% owned by the government, and Swedish Intercontinental Airlines (SILA), privately owned company, has been formally recommended by the Swedish Parliament's Committee on Civil Aviation. It has been known for some time that the two companies would merge. Name of the new company will be ABA, with the merger effective July 1, 1948. Scandinavian Airlines System (SAS) is not affected. The new ABA will take up the duties of SILA in SAS.

Brazilian Lines Approved to U. S.

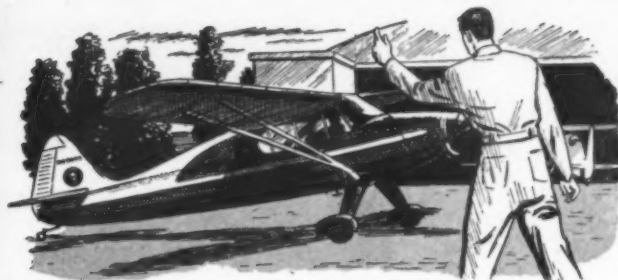
The Brazilian Air Ministry has given five-year contracts to two Brazilian companies to fly between Brazil and U. S.

Servicos Aereos Cruzeiro do Sol, Ltda., which has been flying special charter trips between Rio de Janeiro and New York for the past year, has been approved for weekly trips. **Aerovias Brasil**, second company involved, was a subsidiary of TACA until last January, when a group of Sao Paulo bankers purchased TACA's stock. Its contract calls for bi-weekly trips from Rio to New Orleans. This company has been operating non-scheduled charter trips from Rio to Miami since 1942.

AMERICAN AVIATION

Standard of California's

PLANE FAX



A page of service tips for private flyers and fixed-base operators

Airport dealers to carry new accessories



As an additional service to flyers, Standard Airport Dealers are now adding a complete new line of top quality aviation supplies. With everything from tires and tubes to flashlights and plexiglass cleaner, in the nationally famous Atlas line. Standard Airport Dealers now offer complete, one-stop service. For cross-country flyers the availability of these new supplies is a sure time. and money-saver, as Atlas Aviation supplies may be purchased on Chevron National Credit Cards.

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Plane tires don't have far to roll, it's true, but it is still important to keep them up to snuff. And it's too late to check your tires when you're circling to come in. Watch for bruises, small cuts, and make sure of *proper inflation* before taking off. If a new tire is in order, your Standard Airport Dealer can now supply you a superior quality Atlas Aircraft Tire. Their "safety factor" and durability is due to the engineering which produced the best for military planes.



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Famous Standard of California Products

Editorial

(Continued from page 1)

an "out" by delaying the filing of an arbitration refusal with National Mediation Board.

If Dave Behncke is testing his strength against that of W. A. Patterson, United's president, he has met a real match. No airline executive has been more helpful to the pilots and more liberal in his concessions to them. He has encouraged the ALPA and told his pilots to join the union. Today "Pat" is depressed and disappointed—but he is also fighting mad. The pilots had best ponder well before they alienate for good their best airline friend in preference to following blindly a path which means ruin for their employer and a big black and yellow streak over the pages of ALPA.

This is the big test for the organized airline pilots. To strike against United Air Lines over a grievance issue after pay and all other matters are settled would be the blackest and most shameful event in air transport history. In every power-demanding individual or organization there comes the inevitable breaking point when the grasp goes just a step too far. Mr. Behncke would wreck an airline, yes, but he would also bring his own organization into disrepute and disrespect.

ALPA was organized back in 1931 when there were fewer than 600 pilots and a brash young industry was hell-bent for expansion. Mr. Behncke was known by the code designation of Mr. K. during the secret founding days and the other founders likewise had alphabet code designators. This was before Mr. Behncke endeared himself to aviation history by landing his transport in a treetop and thus became the first scheduled airline pilot to slide down a tree trunk as part of a landing procedure.

Through the years ALPA has done a lot for its members and the more thoughtful and progressive of airline managements have openly favored a pilot union. Certainly on the pay issue alone, ALPA was the sole means of protection against low pay scales when the competitive fever in the industry was much greater than it is today. But there is no longer a major pay issue in existence and Mr. Behncke must turn his attention to other tricks of the union trade. It is unfortunate that he has been bitten by a bug called strikitis and is getting himself entangled in situations which can lead only to the ruin both of companies and his own union.

The industry has grown not only in size but in outlook as employers. Mr. Behncke not only has failed to advance with the times but he has retrogressed. Even in 1931 he went on a rampage at the very suggestion that radio might some day make airway beacons obsolete or of secondary importance. (See Vol. I, No. 1, of ALPA Bulletin, Oct. 1, 1931.)

When ALPA was organized Behncke and his fellow pilots took a pledge "never to contribute to the

circulation of harmful comment, rumors, criticisms of brother pilots," and "to perform my duties and conduct myself in a way that will inspire confidence and reflect credit to this Association." But the rumors which spread over the United system early this month were malicious and untrue to a startling degree, yet Behncke did nothing to stop them. Year after year the ALPA leadership has become more and more destructive and more class-conscious, and less and less a constructive branch of aviation.

On October 9, 1931, Mr. Behncke wrote his first letter as ALPA president to airline presidents, saying in part that "The workings of the Association are very simple. Each individual operator has the opportunity to deal with his own men, who have formed a council on his line, with regard to all matters pertaining to the pilots problems." Yet today Behncke calls the shots on United and, in fact, initiated the break in negotiations.

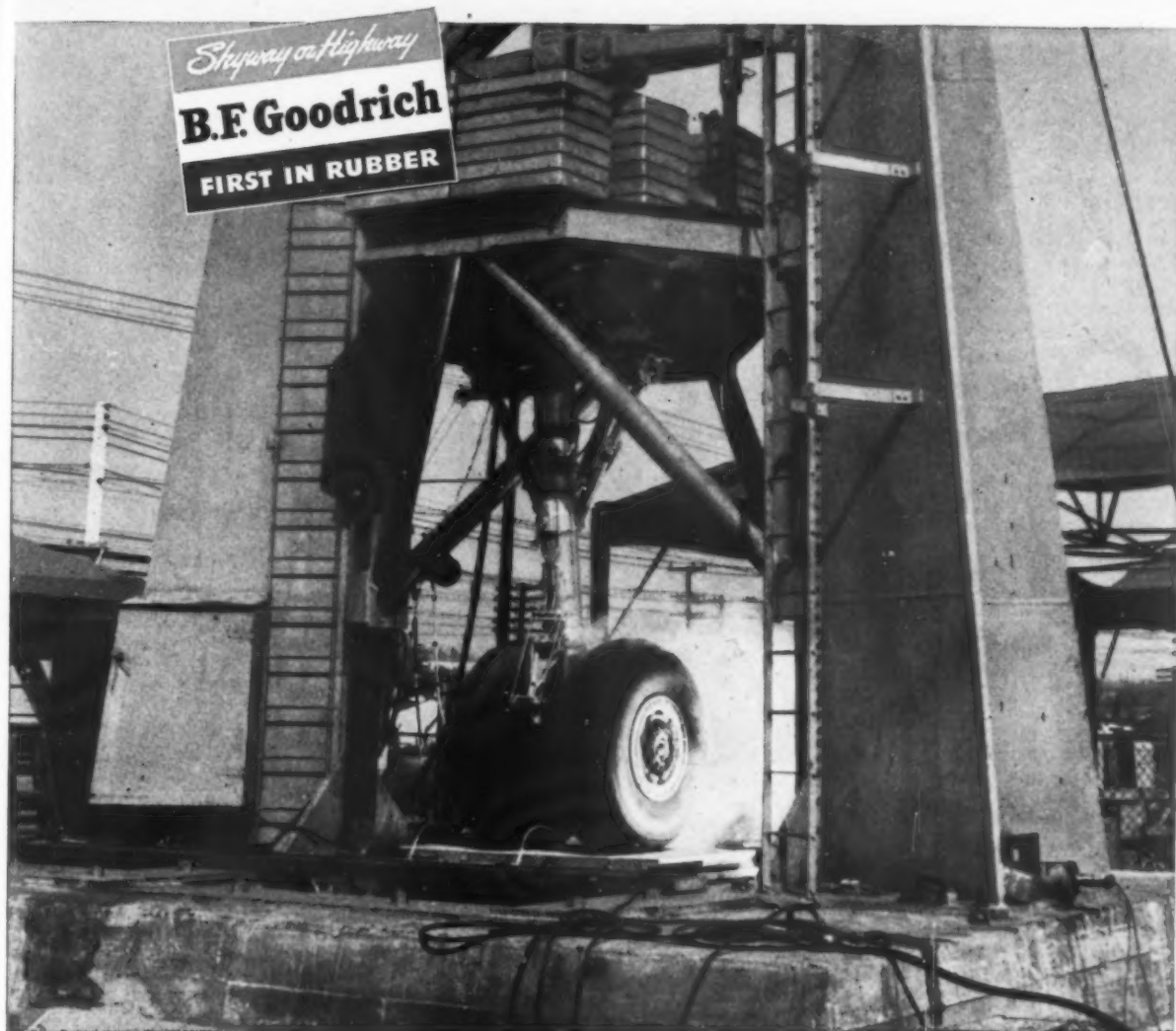
It must be hard for the rank and file of ALPA members to swallow the testimony of their great leader before the President's Air Policy Commission two weeks ago on December 2.

"The airline pilots repeat that the record will reveal to the President's Commission that the steady chain of airline accidents is broken only by miracles—miracles of escape," he said.

And what do you suppose were the four "miracles" which Behncke then told about to the Commission? On was a DC-4 which made an emergency landing not so long ago, apparently short of fuel. The President's Commission then recalled to Mr. Behncke's lapsed memory that investigation revealed that the pilot had forgotten to transfer fuel from one tank to another and hence if there was a miracle involved it wasn't due to the pilot. Then Behncke listed as the second "miracle" the Inverted Sisto incident. The Commission agreed this was indeed a miracle but with no credit to playful Brother Sisto. The third "miracle" was, of all incredible things, the Bermuda Sky Queen which ran out of gas a mere 800 miles short of its destination with an overloaded airplane on a non-scheduled run. The fourth "miracle" involved a pilot who got mixed up with a hurricane and Mr. Behncke didn't explain how come the hurricane wasn't reported along the airway.

So Mr. Behncke cites "the courage and steeled nerves" of these pilots who (1) forgot to transfer fuel (2) turned a passenger plane upside down and (3) attempted the aeronautical impossibility of flying the ocean with an overload. Come now, you ALPA members, is this the kind of leadership you've signed away your birthright to get? Fire is dangerous. Take those matches away from the kid before he burns the whole house down.

WAYNE W. PARRISH
AMERICAN AVIATION



B. F. Goodrich tires outwear concrete in landing tests

RUBBER HITS CONCRETE with terrific impact when Lockheed's new drop-test machine goes into action. This mechanism tests landing gear by duplicating an actual landing.

The landing gears are lifted to the desired height on the 40-foot tower and the wheels are spun until they reach a speed of nearly 100 miles an hour. Then the landing gear drops to the concrete platform, simulating an airplane's 100 mile an hour touch-down on an airport runway. And for a few seconds, smoke pours from the tires as the wheels skid to a stop.

These punishing 125,000 pound

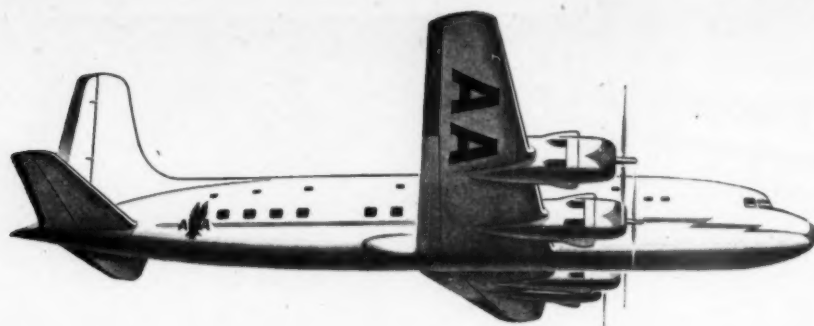
blows are a severe test of the B. F. Goodrich tires used on the landing gear. Here's how they stood up: following the first eighty tests, Lockheed engineers reported that although a hole was worn in the concrete "runway" on which the tires landed, the tires themselves showed no appreciable wear!

These are standard B. F. Goodrich 17.00 x 20 Type III tires. The Type III tire was developed by B. F. Goodrich engineers to make landings smoother and cheaper. Its larger air volume and lower inflation pressure provide superior cushioning, wear resistance and safety.

And by using dual B. F. Goodrich tires, loads are distributed, tires last longer, safety and economy are increased. B. F. Goodrich engineers have advocated the use of multiple tires for fifteen years. And the first duals used were B. F. Goodrich tires.

Developing tires to meet the needs of today's and tomorrow's planes is a constant project of B. F. Goodrich engineers. *The B. F. Goodrich Company, Aeronautical Division, Akron, Ohio.*

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For reservations and information call your nearest American Airlines office or your travel agent.

AMERICAN AIRLINES

Background and Trends

(Significant Developments and Forecasts Based on the Fortnight's Top News)

Merger Talk Dwindles: Merger rumors which permeated the aircraft manufacturing industry during past year has virtually disappeared, due in large measure to ability of Air Force and Navy to distribute some business to all of the recognized companies.

Air Navy: Far greater use of airplanes for transportation of personnel is being studied by Navy, a move that may aid development of new craft by aircraft manufacturers.

Air Mail Favored: One recommendation almost certain to come out of the President's Air Policy Commission study, due to be submitted Jan. 1, is that all first class mail, traveling 300 miles or more, be carried by air. Air parcel post also is expected to get favorable consideration.

Cargo Only: Airlines are moving toward elimination of division of air cargo into two separate categories of "freight" and "express." The certificated lines hereafter will soft-pedal use of phrase "air freight" and stress in advertising and otherwise the fact that they are in business of transporting air cargo.

Pre-Judgment: Action of Rep. Karl Stefan (R., Neb.) and Sen. Homer S. Capehart (R., Ind.) in introducing a bill to create a Department of Transportation in the cabinet has not been very well received in certain Capitol Hill circles. Reason is that Stefan and Capehart both are members of the joint Congressional Aviation Policy Board and their action is regarded as entering judgment before trial.

Off the Beam: The recent National Aviation Clinic at Springfield, Ill., mulled over a record number of 101 resolutions on nearly every aviation subject except all-weather flying—despite fact that a large proportion of delegates had to reach Springfield by surface means because of weather. One of the leading speakers was grounded in North Dakota by weather, and many of those present couldn't return to their homes by air because of weather.

Successor to Young: Some support has been rallied in Los Angeles for Theodore C. Coleman, former v.p. of Northrop Aircraft, as a successor to Clarence Young on the Civil Aeronautics Board. Supporters feel that, with a background in investment banking in addition to his aviation experience, he qualifies fully for the position. He is a Republican and the vacancy is of that party.

Moving Up: For first time in American Airlines history, air freight now surpasses any other source of income, except that from passengers. Mail has long been the second ranking source of revenue. AA in October flew 3,063,136 ton miles of cargo (including 1,906,554 of air freight), first time the three million figure has been reached.

Cargo In Any Weather: The first real commercial venture in all weather flying may come soon in a day-in, day-out scheduled freight service between New York and Chicago. Everything is set to go as soon as a contract for big volume daily shipment is signed. It's what many have hoped for as a starter toward passenger service unaffected by weather.

New Tactics: Institution by CAB's Enforcement Section of injunction suits against Pacific Overseas Airlines, Inc., James B. Cox, d.b.a. Ocean Air Tradeways, and Winged Cargo, Inc., early this month marks a change in Board's tactics. Previously majority of suspected violations of economic regulations were handled through CAB's own show-cause procedure which not only was cumbersome and lengthy but tied up considerable personnel. New method takes cases directly to Federal court which by simple temporary injunction can get desired effect. Also, initiative taken by CAB relieves burden on private carriers who have sometimes found it necessary to file suits themselves.

More 2-0-2's for NWA: Northwest Airlines is understood to be negotiating with Glenn L. Martin Co. for purchase of five more Martin 2-0-2 aircraft. Management and pilots are understood to be well satisfied with utility and performance of the 10 NWA now has in operation.

Future Uncertain: With failure of the International Civil Aviation Organization's Geneva meeting to agree on a multilateral air transport agreement, officials are divided on making another attempt to reach agreement. The Mexican resolution, which would have allowed nations to withhold fifth freedom rights in bilateral route negotiations if they saw fit, passed 13-9 and broke up the meeting. Because the vote was close (and five countries didn't vote) some officials feel an early conference can be held. Others, however, believe it will be necessary to wait about five years so nations can see that U. S. (and other) long-line international operations aren't going to ruin their local airlines.

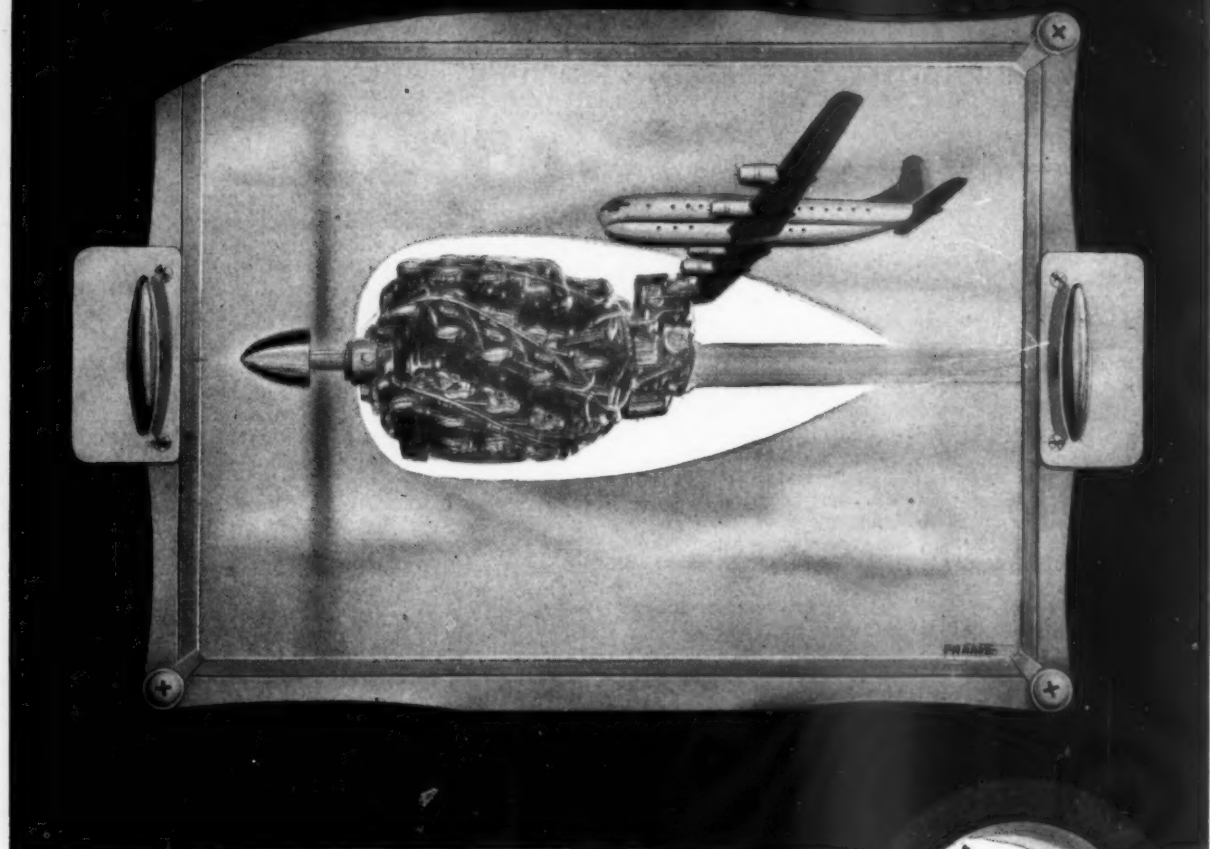
Connies to India: Air-India, Ltd., Indian airline, has worked out arrangements for a new route between Bombay and London, and will use three 749 Lockheed Constellations, its officials say. Lockheed has not yet announced such an order.

Sale Not Imminent: Western Air Lines has no immediate plans to dispose of its Inland Division and no negotiations looking toward its sale are imminent, according to Terrell C. Drinkwater, WAL president. At the time that WAL sold its Denver-Los Angeles route to United Air Lines and WAL adopted a policy of establishing itself as a western regional carrier, it was generally assumed that a further step would be disposal of Inland, operating between Denver and Great Falls, Mont., and Denver and Minneapolis-St. Paul.

Personnel Exchange: Some United Air Lines ticket counter and reservations personnel are being furloughed to Eastern during winter season, under a deal which provides for reverse arrangements during Eastern's low traffic period next summer. Both companies have been exchanging flight equipment on a lease basis for some time, but this is first deal involving personnel. Companies look to plan as means of leveling out seasonal peaks and troughs.

At Low Ebb: State aviation officials requested CAA to provide office space and help for them in CAA offices in Washington, something CAA finds it cannot legally do. If request had been granted, the plan would have been bitterly attacked by airport executives and others. Prestige of the state organization (NASAO) is at low ebb, due largely to activities of past president, L. L. Schroeder, state aviation director of Minnesota.

FLUOROSCOPE OF YOUR AIRCRAFT'S HEART



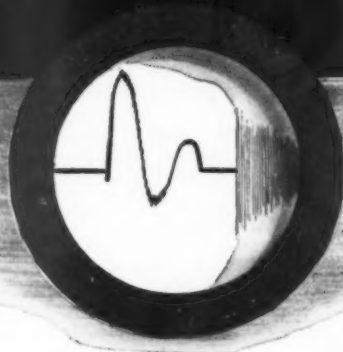
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Airline Insurance Losses Heavy in '47

Underwriters' Payments Expected to Exceed Gross Premium Income by \$5-\$9 Million This Year

By WILLIAM E. BLAIN
Executive Underwriter
Aero Insurance Underwriters

When those keenly interested in our scheduled airlines review this year's unfortunate accidents, they wonder what effect this record will have on airline insurance. In the first 11 months of this year, we have had 12 fatal airline accidents resulting in 240 passenger and 41 crew member deaths.

Aircraft destroyed in these accidents alone were valued at about \$4,600,000. In addition, flight losses where no deaths occurred, such as belly landings and overshot landings, will add another \$5,000,000 in losses. Ground losses such as fire, windstorm and taxiing collisions, etc., will cost the companies around \$1,250,000. Unquestionably, physical damage done to airliners this year will total 10 or 11 million dollars. Contrast that with a hull premium income for the year which will not exceed \$5,000,000.

As for passenger deaths, the estimated legal liability insurance payments for passenger fatalities will be \$3,000,000 and payments for serious passenger injuries, death and injury to members of the public and property damage caused by airliners will easily total another \$800,000. Therefore, the losses for third party liability will be \$3,800,000 compared to premiums received of not over \$2,000,000.

Payments Top Premiums

The insurance companies will pay at least \$500,000 more in workmen's compensation claims than they received in premium. Airline personal accident losses will exceed premiums by something like \$750,000 to \$1,000,000.

The sum total of the above shows very clearly that domestic insurance companies' loss payments will exceed gross premium income by somewhere between five and nine million dollars in airline insurance in 1947. Unless you work for some government agency, that loss figure will impress you. Do not forget that the insurance companies over and above actual loss payments have acquisition and servicing costs which will further increase their net loss for this year.

If space permitted, it can be clearly

and irrefutably proved that airline safety does not suffer by comparison with other means of transportation. All deaths connected with operation of passenger automobiles and taxis are 4.0 per 100,000,000 passenger miles. The figure for buses is 1.4, for railroad passenger trains 3.2, scheduled airlines 1.8. (These figures are for 1946 and include all people killed by the vehicles, not only passengers.)

The 1943-45 average was 4.6 for automobiles, 1.5 buses, 2.5 passenger trains, 2.4 scheduled airlines. While the 1947 increase in airline fatalities will raise the ratio for this year, it is not expected to affect the five-year average substantially.

Previous Experience

During the period from 1940 to 1946 inclusive (according to statements filed with the New York Insurance Department) the American companies received \$24,450,000 in premium for scheduled airline hull and liability coverage and paid losses of only \$15,340,000. This gross profit of over \$9,000,000 gave them an attractive net profit margin, but it is most distasteful to have virtually all of this profit wiped off the books in this one

disastrous year. (After deducting unearned premium, acquisition costs, administrative costs, adjustment expense, and the cost of catastrophe reinsurance, the companies may have made a net profit of \$2,500,000 over this seven year stretch, the most favorable era of airline insurance.)

The disturbing feature about this year's bad experience is that it does not stem from unusual catastrophes or disasters. By that we mean that there were no sweeping hangar fires, nor was there any disastrous mid-air collision of two fully loaded four-engined aircraft. Nor was there a crash of an airliner into a crowd or business district. As an underwriting firm ticks off the years in a given line of business, there must always be a certain amount of reserve set aside for unforeseen and unusual catastrophes comparable to the Texas City disaster in other lines of insurance.

The main factor accounting for the excellent experience of airline underwriters during the preceding seven years was a standard frozen model, namely our old friend, the DC-3. In this period somewhere around 85% of all airline passenger traffic was in DC-3's. By 1940 most of the "bugs" had been eliminated from this aircraft. Pilots and maintenance men knew its characteristics and limitations thoroughly. There was a con-

U. S. Scheduled Airline Fatal Accidents in 1947

Date	Place	Fatalities		Type	Approximate Value
		Passenger	Crew		
Scheduled Flights					
1/12	Galax, Va.	15	3	DC-3	\$ 75,000
5/29	New York, N. Y.	40	2	DC-4	300,000
5/30	Bainbridge, Md.	49	4	DC-4	400,000
6/13	Leesburg, Va.	47	3	DC-4	300,000
6/19	Meyadine, Syria	18	3	Constellation	750,000
10/24	Bryce Canyon, Utah	46	6	DC-6	700,000
10/26	Alaska	13	5	DC-4	300,000
11/30	Seattle, Wash.*	6	1	DC-4	225,000
Training, Survey and Research Flights					
4/22	Columbus, Ga.	6	2	DC-3	75,000
5/14	Wilmington, Dela.	...	5	Constellation	750,000
8/8	New York, N. Y.	...	3	DC-3	75,000
11/18	Delaware Bay	...	4	Constellation	750,000
Overall Totals		240	41		\$4,600,000

Note: Not all losses are borne by American insurers. One or two airlines carry virtually all their own crash risk, others carry their own risk on lower valued aircraft. Under some insurance plans, airlines bear a substantial portion of certain type losses. A third of the U. S. Airlines are covered by London insurers. But from the above list, for example, only one aircraft was self-insured and one loss paid by London insurers, the two aircraft combined being worth approximately \$1,000,000.

*Non-scheduled flight by a scheduled airline.

tinuing improvement in airport facilities, and runway lengths were well within the demands of this aircraft. Note that only one-fourth of the washouts were in DC-3's whereas probably two-thirds of the airliners in service were DC-3's.

Insuring a relatively large number of units with known performance and of the same average value is a fundamental of even and predictable underwriting results. Neither the aircraft value nor the maximum passenger exposure per unit represented an abnormal percentage of the total hull or liability premium income. We may never again experience a period where scheduled airline underwriting has so many favorable elements.

Why Was 1947 Bad?

There are a number of reasons why 1947 airline experience was bad, and most of these reasons should have been as obvious a year ago as they are today. Surveys demonstrated that the accident frequency curve always jumps upward with the advent of a new model. This year has been a proving year for Lockheed Constellations and Douglas DC-6's. Strangely enough, certain "bugs" of the Douglas DC-4 waited until 1947 to crop out. Rapid over-expansion of airlines resulted in top management getting too far afield from actual operations and other organizational problems which had an adverse effect on safety.

However, the most telling factor was that the four-engined aircraft are worth four to 10 times as much as the average DC-3; airlines therefore have unbalanced fleet values.

The total valuation of all U. S. airliners does not exceed \$300,000,000 and averaged about \$250,000,000 during the year. As aircraft hull losses amount to between 10 to 12 million dollars, it would have taken an overall average rate of 6% for hull insurance to break even. One year's premium must include an appreciable figure for catastrophe reserves as well as afford a reasonable figure for acquisition and underwriting costs plus an underwriting profit. Hull rates actually averaged slightly under 5%, we believe (our competitors won't tell us everything—as a matter of fact, we believe they invented the iron curtain).

Assume that 12 washouts is a reasonable annual expectancy with our present fleet of approximately 1,000 airliners. Assume further that partial losses will approximately equal the total loss in washouts. If we insured 1,000 DC-3's at a valuation of \$75,000 each, our national airline fleet would have a value of \$75,000,000. On such a fleet and with the given premises, during the average year when no disastrous hangar fire or other catastrophes happen, the losses should be in the neighborhood of \$2,500,000 (includes estimated ground losses). This would mean a pure "burning rate" (proportion of the rate sufficient

On Its Own Feet

Commercial aviation people (in fields other than scheduled airlines) feel that all classes of aviation insurance rates will go up so that the underwriters will recoup the obvious losses on scheduled airline business. Such will not be the case. The Insurers will stand this year's airline losses out of the profits from previous favorable years, from increased airline rates, or from a combination of both. As a matter of fact, experience in some other aircraft classifications has been as bad or worse than on airlines.—W. E. B.

only to take care of expected losses) would be about 3½% and the rate charged for insurance to include overhead, profit, etc., should not be over 4.75%.

During the past year less than one-quarter of total airline aircraft were four-engined aircraft, but nine of the twelve washouts were four-engined aircraft. The numbers involved did not permit the operation of the law of averages and the fates decreed against the underwriters.

The high valued Constellations and DC-6's flew less than one-twelfth of the aircraft mileage, so averages would dictate that only one of these should crash. Three Constellations and one DC-6 were total washouts. Had only three or four of the airline disasters been in four-engined aircraft with only one or two of those in the more costly new models, underwriting results while still bad, would not have been catastrophic.

Future Factors

What can we expect for the next two or three years? To our mind, the answer is already given above as we are facing precisely the same problems which existed at the dawn of 1947. We do have other favorable factors. The Constellations and DC-6's will become safer with each additional month of operation. Airline management and organization is improving. Greater airline safety is recognized as the foundation upon which their growth and their profits depend. There is every evidence that refinements of ground and airport controls will greatly lessen the number of bad weather accidents and greatly improve the safety of instrument flights as well as reduce weather cancellations.

The new models now being operated and those which will shortly make their appearance will not be as safe in 1948 as they will be when they have been seasoned by service. This is a fundamental element of risk which cannot be eliminated from an improving airline industry.

Our interpretation of pilot sentiment is that they firmly believe (as do underwriters) that today's complicated and gadgety cockpits breed

unnecessary danger. We are not trying to unduly criticize the aircraft manufacturers who have certainly produced marvelous, comfortable, efficient and fast airliners. Designers and engineers must, however, eliminate cockpit hazards such as have resulted in pilots mistaking the undercarriage control for the flap control. Cockpits can be so designed that such a mistake would be truly foolhardy and gross carelessness rather than a natural or excusable error.

We must decide whether or not 1947 experience was just a brief unfortunate interlude in airline operations or whether it represents a reasonably accurate index for the near future. There has been no appreciable increase in airline insurance rates. Those particular airlines which have had a bad loss ratio should expect a rate increase when their policies are renewed.

The Bigger They Are

With the highly integrated four-engined aircraft any accident where the force is sufficient to damage any part of the aircraft, generally the resulting loss runs to thousands of dollars, and repairs equal a substantial percentage of the full cost of the aircraft.

You may have heard the term "flying total loss." A non-scheduled cargo DC-4, landing at Puerto Rico on a rainy night, hit a slight upgrade short of the runway, bounced several feet into the air, but the pilot recovered control and came to a normal stop. The crew were only slightly jarred, the cargo was undamaged. One engine dropped 15°; interior wing structure was twisted; center section and fuselage were buckled. That aircraft was flown empty from Puerto Rico to New York without incident and a passerby might not realize it had been damaged. Structural damage precluded repair and salvage was practically limited to the engines, seats and instruments. The aircraft was insured for \$225,000 and the underwriters paid a net loss of \$160,000.

A comparable incident with a light plane in the majority of cases would not be any loss at all because the gross weight of the plane is so light. If the landing gear of a \$3,000 light plane gave away, a loss of this kind could normally be repaired for around \$300 or 10% of total valuation.

Landing gear failures or unintentional retraction of gear (one during taxiing) in newer model four-engined aircraft have resulted in losses greater than \$200,000 or more than 25% of total value.

Conclusions

The aircraft liability classification poses no acute problems, except for a brief spell when the first few 100 passenger airliners make their appearance. Bodily injury coverage (to personnel other than passengers) and property damage coverages have been

profitable, but there is the ever present hazard of freak and unusual disasters which will wipe out many years of premium.

As passenger liability is assessed on a per passenger mile basis, when the 100 passenger airliners are in use in volume, they will carry such tremendous passenger loads that their assessed passenger liability premium will take care of the large exposure. Some underwriters, more experienced than the writer, do not concur with the previous sentence—they contend that the "catastrophe" exposure of the super-airliners is greater than their proportionate premium "contribution."

The picture on aircraft hull insurance on the contrary is unpredictable, but it looks bad. Obviously, there must be an immediate and continuing improvement or hull rates must go up. This year's hull experience indicates that a general increase of one to one and one-half percent in average rates is necessary. This would mean an additional premium expenditure of \$3,000,000 to \$4,500,000 which the airlines cannot afford.

DC-6's Expected Back In Use Next Month

With the cause of the two in-flight fires which led to the voluntary grounding of all airline DC-6's on Nov. 12 well established, indications last week were that all of the planes affected would be back in service by mid-January.

The industry-government Aircraft Modification Committee named to study information gained from the two accidents and to recommend remedial measures reported it had determined to its satisfaction that overflow of gasoline while it was being pumped between the main tanks and auxiliary tanks caused the Nov. 11 DC-6 fire at Gallup, N. M., and that the same condition probably caused the fire in the Bryce Canyon, Utah, accident.

The overflowing gasoline, the report said, was sucked into the cabin heater air intake and ignited. Douglas Aircraft Co. engineers found that a recurrence of this hazard could be prevented by changing the position of the gasoline overflow vent.

This modification could be effected easily, it was found, but the airlines decided that while the planes were grounded they'd might as well take the opportunity to effect a number of other more or less minor modifications not directly related to safety but which would, have to be made sooner or later.

Public hearing into the burning of the United Air Lines DC-6 at Bryce Canyon was to be held this week, but it was expected to bring



Floating Dove—The British de Havilland Dove transport, which is making a bid for the local service market, has been equipped with floats and is undergoing tests by the Department of Transport of Canada. The Dove reportedly has direct operating cost of 25c per plane mile.

forth nothing that would alter the findings of the Aircraft Modification Committee.

Affected by the grounding are 93 aircraft owned by American, United, National, Braniff, SABENA Belgian Air Lines and Panagra. Although the carriers have succeeded in maintaining most schedules by rearranging flight patterns and shifting DC-4's to routes on which the DC-6's had been flying, the grounding of the planes has been costly from the financial aspect.

It is possible some of the planes may be back in service within a fortnight, but both American and United have set the return to service of their DC-6's beyond the first of the year.

American, EAL, NAL Join in Fare Increase

The 10% passenger fare increase initiated in October by Northwest Airlines and subsequently proposed by several other carriers began snowballing in late November and early December and indications last week were that nearly all domestic air carriers would apply for higher fares by year's end.

American Airlines, which had previously opposed the upward trend, applied to CAB on Dec. 3 for permission to initiate a 10% fare increase, effective Dec. 12.

Previously, United, Western, TWA, Inland, Capital, Delta, Chicago and Southern, Mid-Continent, Braniff, Pioneer and Southwest had followed Northwest in applying for permission to up fares 10% this month. The increases proposed by C & S, Delta, MCA and Braniff, however, were not applicable to certain route segments.

Eastern Air Lines and National Airlines indicated that they planned to file tariff increases about Dec. 15,

to take effect Jan. 15. Continental and Northeast filed on Dec. 5 for short-notice permission to make their increases effective on the same date as most of the other applicants, although variations in the then existing fares would not bring the increase to 10% on all routes. In general, fares on competitive segments would be equalized.

Colonial, only trunkline carrier not committed, said it planned no general increase because some of its fares already were above the industry average, but it indicated it would if necessary, raise fares to meet those of other carriers on competitive routes.

The 10% increase, second for this year, boosted most domestic airline fares from 5.1c to 5.6c per mile, which leaves them still slightly below 1941 tariffs.

Industry Outlook Dim As Load Factors Sag

The downward trend in airline load factors throughout the industry continued unabated during late November and early December, with a dim outlook for the remainder of the winter.

Near-empty airplanes on some schedules were too common to be joked about during the first week of December. Route load factors below 40% actually occurred for the first time since before the war. Most system load factors were ranging between 50% and 62%, while few companies were above the latter figure.

With an \$11,000,000 industry-wide loss for the first nine months, there was every indication of a heavy additional loss for the last quarter. It is too early to analyze the drop in air travel, but there was one thing that was abundantly certain: there were acres of seats available as December got underway.

UAL-Pilot Negotiations End; Strike Vote Is Taken

After 15 months of negotiations for a new contract, and with every single point settled except one, the pilots broke off their meetings with United Air Lines late in November, and a strike vote was taken during the first week of December.

It was expected that the vote would be heavy in favor of a strike, although the ballot did not state the strike call directly in so many words.

Dave Behncke, president of the Air Line Pilots Association, told *American Aviation Daily* that United's insistence on changing the machinery for handling of grievances after practically all other important differences dealing with wages and working conditions had been resolved, resulted in the decision to take a strike vote. He said that United had not listed its desire for a review of grievance procedures at the opening of contract discussions as is required by Railway Labor Act procedures. He said United's belated effort in this regard was out of order.

W. A. Patterson, president of United Air Lines, did not deny that the company request for a section on grievance procedures had come since the start of negotiations August 20, 1946, but said there was nothing new, novel or illegal in discussing any and all proposals at any time during negotiations on any contract.

Would Ruin Company

There was no question that if the pilots struck, United Air Lines would close down to a skeleton force of a few hundred people. This means dismissal of about 9,500 persons. Patterson was frank in saying, too, that a strike would ruin the company financially, coming as it would after grounding of the DC-6's, higher operating costs and lower load factors.

On Dec. 4, National Mediation Board officials told *American Aviation Daily* that the ALPA had not rejected formally the board's proffer of arbitration. As a 30-day cooling off period is required from the time that all parties have responded to the offer of arbitration, the date of a possible strike could not be determined, assuming the pilots backed up the strike order. United Air Lines accepted the arbitration order immediately but as this issue went to press, ALPA was still silent.

On Nov. 28, Mr. Patterson sent a letter to all captains and first officers

from which the following pertinent excerpts are taken:

"The only difference remaining now concerns this company's proposed grievance procedure. It is my understanding that this provision is contrary to a philosophy and policy of the ALPA. Information has come to me that our pilots have no alternative but to strike unless the company withdraws this proposal. If this is true, it is amazing to me to learn that our pilots find themselves in a position where there is no alternative but to strike.

"The fact that some of our pilots feel that we are deliberately stalling on a contract is an extreme disappointment to me. I cannot understand the position I find myself in at this particular time. On more than one occasion pilots of other airlines have exhibited enough confidence in me to visit my home on a week end or evening for the purpose of seeking advice concerning problems they were having with their managements.

"Dozens of pilots in United Air Lines have evidenced enough confidence in me to seek advice in regard to personal problems completely detached from our business relationships. I have tried to take inventory of myself to find out what I may have done in the past few months that would give evidence that confidence has been completely destroyed and replaced by an attitude of distrust.

Patterson's Own Idea

"... Now, I should like to talk a little about our proposed grievance procedure. I am informed that there is a suspicion that this involves some great scheme of the Airline Negotiating Conference to deprive our pilots of some advantage. This is the most ridiculous accusation I have heard. I want all concerned to know that the grievance procedure is my personal and individual idea and proposed upon my insistence.

"I have never attended a meeting of the Airline Negotiating Conference in my life. I have never made an agreement with the Airline Negotiating Conference, the Air Transport Association, or any other individual airline or group of airlines involving any employee whether he be pilot or janitor. I have always wanted to maintain an open mind and be in an independent position to do what was fair for people according to our standards and not the standards of others. We are members of the Airline Negotiating Conference which we use primarily for statistical information.

"... All we ask for in this contract is that when we have a grievance we try to settle it at the first level of supervision and as quickly as possible. Any authority will tell you that one of the secrets of good relationship with employees is a definite and precise procedure for settling grievances as soon as they arise. Any primer on the subject of such relations will place grievance procedure as a secondary requirement to that of actually accepting the philosophy of collective bargaining.

"... It seems unfortunate to me that all other terms and conditions, particularly that including pay, have been agreed to and we now are confronted with the possibility of a strike on an issue that 99% of all unions actually require in their contracts. We have this provision in all of United Air Lines' other contracts and I cannot see my way clear under any circumstances to eliminating it in the pilots' agreement.

"Frankly, a strike over such an issue would not get sympathy from the most liberal-minded people of this country who know so well the importance of a proper

grievance procedure in promoting harmony and understanding. You will have a decision to make when you are called upon to vote for a strike.

"All I ask, without casting reflection on any organization or group of people, is that you read carefully and be sure you know the exact issue for which you may be striking. When that vote is cast you may be deciding the future of this company. The personnel of United Air Lines would be reduced to a skeleton organization with only a few hundred remaining of our 10,000 employees. We have an identical pattern before us with that of TWA. The grounding of their Constellations and a strike ruined them. Our situation would be the same.

"... Naturally I am greatly depressed that conditions should ever reach a point in United Air Lines where we should even be mentioning the word 'strike.' In fairness to you, I believe my position should be made very clear. I cannot concede to the demand that a grievance procedure be eliminated from this contract. It has been seldom in my life that I have been forced to a point of taking such a positive and definite stand."

In closing, Patterson said he is not trying to destroy ALPA, and that if he were a pilot, he would be a member. But he said he was writing "as a last-minute effort to prevent drastic action on your part."

NAL Threatened with Pilot Strike Over Grievance Case

A threatened strike of the pilots of National Airlines over a grievance case involving a pilot who was discharged in September, 1945 after an accident in which a Lockheed Lodestar, carrying 13 passengers, came to rest on a seawall along Tampa Bay, had not materialized as this was written. The pilots of National have authorized their council leaders and David L. Behncke, president of the Air Line Pilots association, to strike the airline if the matter is not settled to the satisfaction of the pilots.

ALPA officials are demanding the reinstatement as a captain of Maston G. O'Neal Jr., pilot of the Lockheed Lodestar, which figured in the accident Sept. 13, 1945. There was no loss of life.

Since the accident, a System Board of Adjustment, of four members—two chosen by the pilots and two by management—have failed to reach agreement. In an effort to break the deadlock, the System Board signed a written request to the National Mediation Board asking the board to appoint a neutral. Pertinent part of the agreement stated: "The undersigned hereby agree that this Board so constituted with the fifth or neutral member has jurisdiction in this case and that the decision of the Board so constituted shall be final and binding upon National and ALPA."

NMB appointed Oscar Bakke, of the CAB Safety Bureau, as the fifth member. National accepted the appointment but Behncke objected, on the grounds that no government representative, especially one from a bureau concerned with revocation of pilot licenses, should have been

The CAA tower cleared the ship for landing. Pilot and co-pilot claimed they stood on the brakes and got no response. Evidence showed no skid marks on the runway but deep skid marks in the turf. Pilots contend that after this accident, National changed the brakes on all of its Lodestars.

Other AFL unions showing signs of increasing activity in organizing airline employees include: the International Association of Machinists, which has 22 agreements with 11

The airlines with which amendments and supplemental agreements had been concluded by ALPA included: American Airlines, Braniff, Capital (PCA), Chicago and Southern, Colonial, Continental, Eastern, Mid-Continent, National, Northeast, Northwest, Panagra and TWA.

Charles R. Sisto, Culver City, Calif., former pilot of American Airlines, has requested a public hearing on a complaint filed against him by CAA for doing an unscheduled violent maneuver of a DC-4 aircraft, carrying passengers, while flying over Texas Oct. 8.

[illegible]

CAB Stays C & S Kansas City Service; Re-Opens Case

In an "unprecedented" decision bringing sharp repercussions, the Civil Aeronautics Board on Nov. 28 ordered a temporary stay of Chicago and Southern Air Lines' certificate for a new route between Kansas City and Memphis, and reopened the case for re-argument and reconsideration. The airline received word of the stay less than 72 hours before it was to inaugurate service on Dec. 1.

Petitions for reconsideration of the controversial case had been filed by Eastern Air Lines, Delta Air Lines, Mid-Continent Airlines, and the cities of Kansas City, Montgomery, Tallahassee, Birmingham, Tampa, Miami, Dothan, Ala., Albany, Ga., and Joplin, Mo.

Sidney A. Stewart, C & S executive vice president, called the Board's action "to the best of his knowledge, unprecedented."

No Previous Indication

Speaking of the September, 1946 traffic survey, cited by CAB as a reason for reopening the case, Stewart said: "This traffic survey was available some time before the original decision to award the route to Chicago and Southern was made. . . . We had no previous indication that the Board would reverse its decision and accordingly the company in good faith expended approximately \$15,000 in advertising, survey flights, navigational aids, personnel salaries, traveling expenses, etc."

Stewart stressed as "much more important to us" the "unwarranted damage to our reputation and the depressing effect on the morale of our employees which constitutes a serious consequence to an unprecedented action."

Referring to the internal mechanics of the stay order, Stewart said, "The original decision granting us this route was based upon the favorable vote of three members of the five-man Board. Clarence Young, one of the concurring members, has since resigned from the Board and has not been replaced. Vice Chairman Oswald Ryan, who also voted favorably, is at present in Europe. It appears that this reversal of opinion was possible inasmuch as the only members available to vote consisted of the dissenting members and the remaining concurring member, Harlee Branch."

Decision Unanimous

CAB stated that the vote on the question of re-opening the case was a unanimous one.

C & S had previously indicated that it was postponing indefinitely the opening of service to Springfield, Mo., listed as an intermediate point on the certificate, because of "a discriminatory attitude" in the part of the Springfield Municipal Airport Commission. The Commission, Stewart declared, had "taken the attitude that we either rent space in the terminal—space we wouldn't need, since American Airlines would be in complete charge of our operation—or pay a premium fee for the privilege of landing at the field."

Stewart pointed out that the amount of money involved was insignificant but "as a matter of principle we cannot set such a dangerous precedent in Springfield. The entire structure of landing fees throughout the country might be affected."



Amphibious Helicopter— This new model 47-D general utility helicopter, now in production at Bell Aircraft Corp., can easily be converted for amphibious operations by attachment of a simple flotation gear. Model 47-D, fourth of the basic series, offers a convertible cockpit; it can be operated either with a completely enclosed cockpit as shown, or with upper part of glass canopy and doors removed.

Pilot Pension System Proposed by Behncke

A pension system for pilots under some form of government supervision, was urged by David L. Behncke, president of the Air Line Pilots Association in a statement to the President's Air Policy Commission. He also reiterated strongly his support for re-establishment of an Independent Air Safety Board and proposed the establishment of a Bureau of Standards for Air Safety.

Behncke urged a retirement or pension program in which the pilots and carriers each would contribute one-half of the expense, set up somewhat similar to the provisions in the Railroad Retirement Act. He said a retirement plan was urgent because pilots have a relatively short working life which is probably 15 to 20 years shorter than in other industries.

Aviation Calendar

Dec. 17—11th Annual Wright Brothers Lecture, Dr. Sydney Goldstein, U. S. Chamber of Commerce Bldg., Washington.

Dec. 17—Annual Wright Brothers Anniversary Dinner, Aero Club of Washington, D. C., Sir William Hildred, speaker, Statler Hotel, 7 p. m.

Jan. 7—Florida Flying Alligator Club initiation, Melbourne, Fla.

Jan. 7-30—Second Annual Air Transportation Institute, The American University, Washington, D. C.

Jan. 9-11—All-American Air Maneuvers, Miami, Fla.

Jan. 15-18—Southeastern Soaring Contest, Sanford, Fla.

Jan. 26-28—CAA and non-scheduled operators of Region Four, Ft. Worth.

Jan. 26-28—American Road Builders' Association convention (including airport group, Jan. 27), Washington, D. C.

Jan. 26-29—Institute of the Aeronautical Sciences 16th annual meeting, Hotel Astor, New York (Jan. 27—Air Transport program).

March 26—IAS National Flight Propulsion Meeting, Hotel Carter, Cleveland.

April 4-8—Nineteenth annual convention American Association of Airport Executives and second annual showing of American Airport Exposition, Congress Hotel, Chicago.

July —International Air Exposition (New York's golden jubilee), Idlewild airport.

Sept. 2—Federation Aeronautique Internationale, Cleveland.

International

Jan. 13—ICAO Statistics Division, Montreal.

March 8—ICAO Maps and Charts Division, Brussels.

March 30—ICAO Personnel Licensing Division, Montreal.

April 20—ICAO Rules of the Air and Air Transport Control Division, Montreal.

April 27—ICAO Facilitation Division meeting in Europe.

June 1—Opening of Second ICAO Assembly, Palais des Nations, Geneva. (About 3 weeks).

Sept. 8—ICAO Operations Division, Montreal.

Rodert, of NACA, Awarded Collier Trophy for 1946

Lewis A. Rodert, aeronautical engineer of the National Advisory Committee for Aeronautics, has been announced as 1946 winner of the Robert J. Collier Trophy. He will receive the award from President Truman on Wednesday, Dec. 17, at the White House.

Rodert was cited by the Collier Trophy Committee "for his pioneering research and guidance in the development and practical application of a thermal ice-prevention system for aircraft."

Rodert that night will be an honored guest at the annual dinner given by the Aero Club of Washington in commemoration of the Wright Brothers' flight at Kitty Hawk.

Sir William Hildred, director general, International Air Transport Association, will be guest speaker at the dinner. Wayne W. Parrish, editor and publisher of American Aviation Publications, will serve as toastmaster.

Other guests at the dinner, besides the Collier Trophy winner, will include: the recipient of the Brewer Trophy, which will be presented at the dinner; the recipients of Federation Aeronautique Internationale certificates granted for establishing new international air records; and Dr. Sydney Goldstein, Byer professor of applied mathematics at the University of Manchester, England, who earlier in the day will deliver the annual Wright Brothers Lecture.

Prepared discussions on Dr. Goldstein's paper, which will deal with "Low-Drag and Suction Airfoils," will be given by a panel of representatives of the U. S. Navy, the Air Force, NACA and the aviation industry.

CAB Names Two Assistant Safety Bureau Directors

While the \$10,000-a-year position of director of the Safety Bureau of the Civil Aeronautics Board is still vacant, CAB acted recently to separate the rule making and accident investigation functions of the Bureau by creating two new positions of assistant directors.

John M. Chamberlain, who had been acting director of the Safety Bureau since resignation of Wallace S. Dawson, became assistant director for safety regulation, with supervision over the safety rules and international standards divisions. William K. Andrews, previously assistant chief of the accident investigation division, became assistant director for accident investigation and analysis.

Both men report directly to the Board, pending appointment of a new director.

\$10 Billion Within Decade

Capt. Eddie Rickenbacker, president, Eastern Air Lines, forecast that the airline industry in the U. S. would require a capital investment of \$10,000,000,000 in the next ten years, in a talk before the Association of Customers Brokers in New York. He said it would take three to five years to develop fully the electronic devices for safety, another five years to build additional airports, and 10 years to make air freight a profitable operation, including developments of airports and warehouses for air freight only.

ATA Cuts Budget 15% For First Half 1948

The Air Transport Association, at its stockholder and director meetings in Washington early this month, modified the formula for association dues from a gross revenue to a ton-mile basis and adopted a budget of \$360,000—15% below the same period last year—for the first half of 1948.

The change in the assessment formula had been urged by Pan American Airways, which held its assessment under the existing formula was unjust in relation to the service which it, as an international airline, received from an organization devoted largely to serving domestic air carriers.

Four new ATA directors were elected. They are: Terrell C. Drinkwater, president of Western Air Lines; LaMotte T. Cohu, president of TWA; Croil Hunter, president and general manager of Northwest Airlines, and Robert J. Smith, president of Pioneer Air Lines.

Directors re-elected are: W. A. Patterson, of United; E. V. Rickenbacker, Eastern; Juan T. Trippe, PAA, and C. E. Woolman, Delta. All ATA officers were re-elected also.

It was decided that the series of air transport national radio broadcasts by John W. Vandercook will be discontinued by ATA on Feb. 1.

Colonial Raises Travel Agent Commission on Bermuda Tickets

Colonial Airlines on Dec. 1 raised commissions paid to travel agents on tickets sold for transportation between this country or Canada and Bermuda from 7½ to 10%.

In a message to the American Society of Travel Agents at French Lick Springs, Ind., in late November, Colonial's president, Sigmund Janas, had proposed that commissions paid on domestic airline traffic be increased from the present 5% to 10%. Such an increase could not be effected without the cooperation of all the domestic carriers.

CAB Proposes More Cargo Carriers for U. S.-Alaska

A proposed exemption order allowing additional qualified carriers to enter into cargo service between the United States and Alaska is being circulated for comment by the Civil Aeronautics Board. Reason given by the Board for proposing the exemption—Economic Regulation 292.7—was that certificated U. S.-Alaska carriers are unable to satisfy present demand for cargo service.

There are two groups of eligibles: the 11 Alaskan air carriers now holding CAB certificates, and all carriers operating under Letters of Registration which operated at least six U. S.-Alaska round trips between Aug. 1 and Oct. 31 this year. Service must be all-cargo and may be either scheduled or non-scheduled, but must be limited to points specified in a certificate application filed within 30 days after the proposed regulation takes effect.

Conditions upon which exemptions will be granted are: (1) carriers must file required route applications within time limit set; (2) participating carriers must keep costs and revenues of the Alaska cargo operation strictly segregated in their accounting; (3) carriers enjoying the exemption must relinquish the right to carry passengers between points served in their cargo operations, even though they might have that right on an infrequent or irregular basis under other Economic Regulations.

American Aviation Wins \$2,688 Costs, Damages

Ending four years of litigation, the Federal District Court in Chicago recently awarded to American Aviation Associates, Inc., costs and damages totalling \$2,688.33 in its counter suit against The Official Aviation Guide Company, publishers of The Official Guide of the Airways.

The Official Aviation Guide Company entered suit against American Aviation Associates, Inc., in August, 1943, charging violation of copyright against American Aviation's guide publication. Subsequently the Circuit Court of Appeals held American Aviation Associates, Inc., innocent in all respects. The defendant then filed suit for costs and damages, part of which were mandatory from the Circuit Court of Appeals and the remainder awarded by the District Court.

"We are very happy with the final award which ends a long and needless litigation," Wayne W. Parrish, editor and publisher, said. "Not only have the federal courts upheld us in every respect but we have the satisfaction of being awarded some of the costs to which we were put as the result of The Official Aviation Guide Company suit."

CAB Policy Decision Disallows Retroactive Mail Payments

The Civil Aeronautics Board, by a 3-1 majority, on Dec. 5 ruled that it has no legal power to fix retroactive mail rates for periods during which a formal mail pay proceeding was not pending. On this decision, it dismissed a petition of Pennsylvania-Central Airlines, filed Jan. 14, 1947, asking additional mail pay of approximately \$5,000,000 for June 1, 1942 to Jan. 14, 1947, and a second petition of Transcontinental & Western Air, filed Mar. 14, 1947, asking additional mail pay of approximately \$11,157,000 for the period Jan. 1, 1946 to Mar. 14, 1947.

The Board stated that it "was of the opinion that as a matter of law we do not have the authority to fix a new rate for a period in which a final rate previously fixed by us was in effect and unchallenged by the initiation of a mail rate proceeding." The opinion said that inquiry into the field of public utility regulation, Interstate Commerce Commission decisions, and into the legislative history of the Civil Aeronautics Act "discloses that the Act was never intended to vest in the Board the retroactive rate-making power urged by respondents" (PCA and TWA).

"It is a firmly established law," the majority held, "that a public utility rate deals only with the future. It is not concerned with the reimbursement of past losses nor with the recapture of past profits which have proved excessive. It offers only an opportunity to earn a fair return, and it does not guarantee that such a return will, in fact, be earned." Several Supreme Court decisions supporting this position were cited.

Against Past Policies

Pleas for retroactive mail pay, the majority stated "ask us substantially to put all so-called efficient managements on a cost-plus basis. This would obviously be a reversal of past policies of rate fixing for it would have a natural corollary—the corollary that was freely admitted in this case—that earnings of air carriers in excess of a fair and reasonable rate would be subject to recapture. Such a policy would tend to sap management of those very incentives that in a private economy are essential if we would strive for efficiency."

Discussing the theory that the mail rates it fixes contain compensation for riskbearing, Board said, "This payment for riskbearing is high when the risks appear to be great and low when the risks appear to

be small, but it is a payment for the function of bearing the risk and is not intended as a reimbursement for every loss which may in fact occur."

Member Josh Lee dissented from the majority views, contending that the plain language of the Civil Aeronautics Act clearly permits the Board to set retroactive rates. He accused his colleagues of reading into the Act language he said it didn't contain and of placing a "strained interpretation" on the Act. He listed a number of CAB mail rate cases in which he said the Board actually had granted retroactive mail pay behind the date on which the carrier in question had applied for a new mail rate.

Lee contended that "The Civil Aeronautics Act is a subsidy statute and places upon the Board the responsibility not only for protecting the general public from excessively high passenger and property rates, but also of protecting the carrier from unfair or unreasonably low mail rates in order that its services may not be impaired to the extent that it would be unable to perform the objective of national defense intended by the statute."

Lee stated that "Congress did not fail to provide the Board with adequate power to carry out its obligations under the Act. Section 406(a) permits the Board to make mail rates effective from 'such date as it shall determine to be proper.' The only date which can be 'proper' is one which permits the Board to fulfill its obligations and meet the responsibilities imposed upon it by the Act for the accomplishment of the objectives set forth therein."

Show Cause Orders Issued Against Alaska Airlines

Alaska Airlines has been ordered by Civil Aeronautics Board to show cause (1) why it should not be ordered to cease and desist from engaging in regular service between Anchorage and Seattle; (2) why it should not . . . desist from regular and scheduled air transportation over routes not specified in its certificates; (3) why it should not . . . desist from engaging in the air transportation of persons otherwise than provided in its certificates; (4) why its charter and special service privileges under Economic Regulation 292.2 should not be revoked. Carrier was given until Dec. 15 to file an answer.

The order came on the heels of an accident Nov. 30 in which an Alaska

Airlines' DC-4 crashed and burned after a landing at the Seattle-Tacoma Airport. Preliminary accounts indicated that the plane had landed too close to the southeast end of the airport under foggy weather conditions.

Early last month, Pacific Northern Airlines, of Anchorage, filed an injunction suit in Alaska courts complaining against Alaska Airlines' irregular service between Anchorage and Seattle. It holds no certificate for this route.

CAB Actions

Nov. 24—Order suspending portions of a Delta Air Lines freight tariff and placing it under investigation in the Air Freight Rate Case. (Docket 1705 et al.)

Nov. 24—Exemption order allowing Trans-Air Hawaii to qualify for registration as a Non-Certificated Cargo Carrier. (Docket 3110).

Nov. 25—Order reopening Kansas City-Memphis-Florida Case for rehearing, reargument and reconsideration, and staying activation of the Kansas City-Springfield-Memphis route previously awarded to Chicago and Southern Air Lines. (Docket 1051 et al.)

Nov. 25—Orders denying petitions for exemption authority filed by Willis Air Service and California Growers Air Express. (Dockets 3141 and 2992).

Nov. 25—Order dismissing CAB's investigation of Colonial Airlines' "free ski" tariff. Dec. 1—Show cause order issued against Alaska Airlines' irregular operations between Alaska and Seattle.

Dec. 4—Decision granting trans-Atlantic Foreign Air Carrier Permit to Scandinavian Airlines System. (Docket 2560).

Calendar

Dec. 15—Hearing on reopened portions of the Great Lakes Area Case. (Dockets 1789 and 1790). 10 a. m., e.s.t., Conference Room "C," Departmental Auditorium. Examiner William F. Cusick.

Dec. 22—Hearing on revocation proceedings on Letter of Registration held by American International Airways. (Docket 3167). Examiner Charles J. Frederick.

Jan. 5—Hearing on the Board's investigation of the Consolidated Air Freight Tariff. (American Airlines et al., Docket 2719). Examiner Herbert K. Bryan. Tentative. Postponed from Nov. 15.

Jan. 5—Hearing on Mid-Continent Airlines' Route 26 Amendment Case. (Docket 1956). Postponed from Dec. 8. Tentative.

Jan. 15—Hearing on applications of Braniff Airways and Chicago and Southern Air Lines for removal of restrictions on Chicago-Houston service. (Dockets 1681 and 1798). Examiner Warren E. Baker.

Jan. 20—Hearing on applications of TACA, S. A. (El Salvador) for renewal of San Salvador-Miami and San Salvador-New Orleans Foreign Air Carrier Permits. (Dockets 3016 and 3017). Examiner William J. Madden. Postponed from Jan. 5.

Feb. 4—Hearing on route consolidation proposals of Continental Air Lines, et al. Dockets 576, 994, and 3109. Examiner Paul N. Pfeiffer. Postponed from Jan. 19. Tentative.

Feb. 16—Hearing on application of Mid-Continent Airlines for an alternate St. Louis-Twin Cities Route. (Docket 1050). Examiner Richard A. Walsh. Tentative.

Feb. 16—Hearing on applications proposing additional service in New England. (Docket 1279 et al.) Examiner Edward T. Stodola. Tentative.

Feb. 21—Hearing on Mid-Continent Airlines' proposed Minot-Regina extension. (Docket 628).

AMERICAN AVIATION

IATA Traffic Committee Off To Good Start; Big Job Ahead

By R. D. STEWART

Commercial Director, British Overseas Airways Corp., and Retiring Chairman of the IATA Traffic Committee

As the retiring chairman of the International Air Transport Association's Traffic Committee, I have been asked to venture a few remarks on what has been done in the past year by that Committee. It may well be that, for several reasons, the subject will be of some interest to those engaged in the commercial side of air transport.

In the first place, the past year has been a particularly significant one in the life of IATA; secondly, because of the unique world-wide character of IATA's work, it is especially important to look back from time to time and to try to see whether we are, broadly speaking, working on the right lines. In attempting world-wide co-ordination of an international means of transport, IATA is breaking new ground in the history of commerce. Constant self-criticism is therefore its best safeguard against wasted effort.

The Traffic Committee is appointed by the General Assembly of IATA and its special function is to act as steering committee for the actual Area Traffic Conferences which under the IATA constitution alone have powers to vote on actual legislation binding members on commercial and traffic questions.

Solutions Are Studied

Although the Traffic Conferences are completely autonomous as regards actual levels of fares, rates and charges and related matters, it is essential that some impartial examination is made of problems common to all the Conference Areas and a lead given as to possible compromise solutions which have some hope of acceptance world-wide. The high degree of uniformity reached in the decisions made by the Conferences at Rio de Janeiro in October shows well the value of this system.

The resolutions taken unanimously in Rio de Janeiro ran into hundreds and in very few cases are there more than minor divergencies in the rulings adopted by the Conferences. For all practical purposes the IATA members reached agreement on uniform inter-line rules and practices, universal standard documents of carriage and a standard system of discussing all future tariff and related problems.

Almost every item voted upon owed



R. D. Stewart

something to the work of the Traffic Committee and its specialized subcommittees on tariff principles, agency matters, traffic handling and government forms. In some cases, basic recommendations originally made by the Traffic Committee were elaborated by the Conferences; in others, divergent rulings made by various Conferences were reviewed by the Traffic Committee and combined to produce a compromise acceptable in a standard form by all Conferences.

Rulings on tariff principles ranged from minute details such as methods of rounding off weights and currencies to broad policy rulings such as the decision to apply the "choice of rates" and valuation charges system universally on air cargo and include intricate inter-carrier questions such as provision of meals at connecting points etc. These rulings not merely prevent wasteful and destructive competition which ultimately rebounds on the public in higher costs which delay tariff reductions, but also protect the public from all the inconveniences which follow both for passengers and shippers of cargo if irritating differences in company practices are allowed to multiply.

The traffic handling subcommittee, apart from its contribution to the major achievement of securing approval of a universal air ticket, baggage check and air waybill, also provided Conferences with leads which resulted in simplification and uni-

formity in dealing with inter-line traffic, reservations, action on missed connections, etc.

The subcommittee on government forms had concentrated its efforts on simplification of forms required by governments in aircraft clearance procedure and many countries are now accepting the ICAO standard documents from the carriers.

The agency subcommittee of the Traffic Committee had finalized standard agency agreements and defined qualifications required from agents by the member carriers. Their work will make it possible to control systematically any tendency for carriers being played off against each other and maneuvered into appointing undesirable agents. This will in the long run benefit not only the public and the carriers but it will also strengthen the position of the agents who are a real asset to the industry.

In the space of these brief notes it is impossible to give a full picture of the mass of detailed legislation which has been passed, all tending towards uniformity and smooth co-operation on the international air routes, but enough has perhaps been said to give an idea of the scope and complexity of the problems which have been tackled in the past year.

It is all the more creditable to the industry that it has made these great strides towards putting its house in order when it is recalled that all this has been done in the past crowded two years. The airlines have as it were rebuilt with one hand their own individual organizations, trained new staffs, opened new routes or restarted old ones, brought into operation new types of equipment developed during the war years; with the other hand they have found time to deal with a vast complexity of inter-carrier problems thrown up by the needs of post-war reconstruction of the industry.

Difficulty Was Great

Looking back it is not surprising that IATA has had some little difficulty in establishing, as it has now I think done, a world-wide working basis of uniformity and cooperation. When the war finished, those airline executives who had been in the industry before the war, were faced with a tangle of new problems. Air transport practice had gone on evolving to a large extent in North America even during the war. They had always been different in many ways from eastern hemisphere practices; the differences had become greater because of the break in continuity of commercial air transport experience in Europe and Asia.

For example, in 1945 U. S. operators were reaching forward to almost an omnibus type of operation with no cancellation fees on bookings whereas European operators back in 1939 had still been obliged on economy grounds to protect themselves against waste of space by

severe cancellation regulations. Documents, liability clauses, cargo classifications, codes and a thousand other matters had developed on divergent lines of thought. The war, of course, abolished the Atlantic Ocean as a barrier between the air transport system of the two hemispheres. The need to merge the two systems without 'change of gauge' was a challenge to which the IATA carriers have, I feel, responded very effectively.

A long list could be made of the other ingredients of the troublesome broth which the IATA chefs found boiling in 1945. Developments in equipment were rapidly breaking down the old patterns; they could no longer separate 'intra-European' services from what were once called 'inter-continental routes'. Within two years of its inception IATA had found the world was smaller than it had believed. The original nine Traffic Conference Areas demanded to be merged into the present three—a solution originally thought to involve too much travel for delegates.

Currency difficulties, artificial exchange rates and revision of international principles on 'freedoms', cabotage, etc., all contributed to complicate the general background of IATA's work since 1945. For example, the Universal Air Travel Plan has to be in three or four separate types of account to avoid clashing with exchange controls, and a simple ruling on 'stopover' principles is likely to tangle with ICAO's conception on Fifth Freedom traffic.

Much Yet To Be Done

It is against this difficult background that up to now the work done by the Traffic Committee should be considered. That work is only just beginning. Having reached a working basis of uniformity by modifying past practices we now have to see how further simplification can be achieved. The new standard tickets and waybills are only a step on a long road. The Warsaw Convention is under active study by IATA Traffic and Legal Committees as more simple documents and procedures depend in many points on its revision. A negotiable waybill is considered a possibility and will aid the full development of the air cargo business. The essential basic rulings reached on tariffs, traffic handling, interline co-operation, agency representation, etc. will require development and constant improvement in the light of experience.

Present day traffic is only a fraction of what the carriers must prepare to handle both singly and in combined journeys in future. Much further detailed work to improve the technique of inter-company working is essential if the good start that has been made is to be maintained.

I have stressed in these remarks the importance of the past work of the Traffic Committee as a steering group. Much of the credit for the contribu-

tion of the Traffic Committee to the successful outcome of the joint Conferences at Rio de Janeiro should be given to the first Chairman of the Committee, Mr. C. A. Rheinstrom then of American Overseas Airlines, who between October 1945 and June 1946 gave the Committee such a good send off, and to Mr. E. O. Cocke of TWA who succeeded him. Their experience and impartial and farsighted guidance in the first year did much to put on the right lines the detailed studies which culminated this year in the recommendations voted upon by the Conferences in Rio de Janeiro.

It may well be a source of pride and satisfaction to them that their efforts met with such an admirable response and general readiness to compromise on the part of the delegates at the actual Conferences who had to consider the same problems from the often conflicting viewpoints of their own company interests.

In handing over the Chairmanship of the Traffic Committee to Mr. Dennis H. Handover of A. B. Aero-transport of Sweden, whose experience of commercial air transport problems ranges over three decades, it is safe to predict that the encouraging beginning that has been made will be followed up with equal success.

International Airlines To Cancel REA Contracts

U. S. international airlines as well as foreign carriers operating to the United States will cancel their contracts with Railway Express Agency because the contracts are not in conformance with the standard cargo agency agreement of the International Air Transport Association.

Cancellation will be effective Mar. 1, 1948. Carriers will file separate cancellation notices with the Civil Aeronautics Board.

Under the IATA agreement, no cargo agency can receive as its fee more than 5% of the transportation charge, with no minimum. Contracts with REA, however, vary from this arrangement. American Overseas Airlines, for example, is on a 5% basis, but there is a minimum payment to REA of \$1. Pan American Airways pays 50c per airwaybill. TWA is not affected, because it does not have a contract with REA on international business. Practically all of the foreign lines on the Atlantic do business with REA.

What will happen after next March is uncertain. To date, REA has refused to consider signing a new contract on a straight 5% basis, according to cargo officials. If such a contract is not signed, the carriers involved will look for new ways to handle their shipments. One possibility is that the services of Air Cargo, Inc., which has concluded ground transportation arrangements in key cities, will be available.

Foreign Air Briefs

Haiti: A law which airline officials state will increase the red tape and expense of international air traffic has gone into effect in Haiti. All planes entering the country must present a bill of health certifying that good sanitary conditions prevail at the port of origin and that the plane is free of disease-spreading bacteria at time of departure from such port. This document must be visaed by the Haitian consul at port of origin, for fee of \$15.50. Carriers operating into Port-au-Prince have protested that the law is in conflict with International Civil Aviation Organization practices.

United Kingdom: The Ministry of Civil Aviation is said to be satisfied with flight refueling experiments conducted this summer over the South Atlantic, and believes that the system could be used on regular passenger flights between London and Bermuda. More trials are to be run this winter between England and Canada by British Overseas Airways Corp.

Palestine: A new airline, partly run by London Aero Motor Services (LAMS) on behalf of the Jewish Agency in Palestine, and to be known as Jewish National Airways, is being formed, according to announcement in South Africa by Abel Shaban, a co-director of LAMS (Africa). It is planned that the company will operate scheduled services within Palestine, plus services to New York, London, Prague, Johannesburg, and other points. Douglas DC-4's are likely to be purchased for long-distanced services, with smaller craft on the local routes. Kosher food will be served on all services, planes will bear the Star of David emblem, and no planes will fly on the Jewish Sabbath.

Australia: The sharp decline in air travel between Australia and the United States is said by H. F. Walsh, general manager of Australian National Airways, to be due almost entirely to present dollar shortage. There has been a 40% decline in northbound passenger traffic since announcement in September of the first dollar travel restrictions. Traffic is now confined to bona fide business men and Commonwealth officials.

Symington Resigns as Head Of TCA, Remains on Board

Resignation of H. J. Symington as president of Trans-Canada Air Lines has been accepted with regret by the company's board of directors. Symington had announced last spring that he was planning to resign. He will remain as a board member.

Symington has been with Trans-Canada since its inception in 1937 and was elected president July 24, 1941. All officers and departments of Trans-Canada will report to W. F. English, v. p. operations.

C. D. Howe, Canadian Reconstruction Minister, has been mentioned as Symington's successor, but there was no indication from the company when a new president would be named.

AMERICAN AVIATION



WE "SPARK" THE 2-0-2

At the Baltimore plant of The Glenn L. Martin Company, a General Electric Service Engineer and a Martin representative inspect the new G-E high-tension ignition system on a 2-0-2. This system, revised from the warplane version, will be used on many of the new airline planes. Northwest Airlines has requested it for the 2-0-2s they propose to fly. It will also be used on many of the Martin 3-0-3s, the twin-engine cabin-pressurized airliner soon to enter service.

This ignition system, used on Pratt & Whitney engines in such planes as the C-46 and the P-47 during the war, has been modified for the new R-2800CA engine powering the 2-0-2. Its long service record, plus the fact that it requires little or no maintenance between engine overhaul periods, made it a logical choice for commercial planes.

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Administrative:

William L. Bond, who directed the first operations over the hump between India and China, has been elected v.p.-Orient of Pan American Airways. Headquarters will be in Tokyo. He is resigning as director and v.p. of China National Aviation Corp., but will be appointed by Pan Am to continue as director, subject to CAB approval.

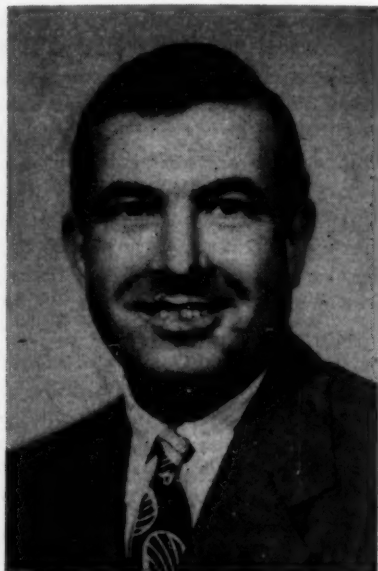
Frederick G. Betts is new system director of purchasing for TWA. Before the war, he was director of purchasing and stores, and since his return from active duty has served as assistant to the president.

J. A. "Add" Thomas has been named assistant to the president of TWA. Before the war, he was in traffic and sales; since the war he has been an executive assistant.

J. V. Roscoe, who has been with Pan American Airways since 1937, has been appointed assistant to Howard E. Dean, administrative vice president. Roscoe started as traffic representative in New York and most recently was assistant to the vice president, Pacific-Alaska Division.

Thomas T. Hinman, previously eastern regional manager of airline sales for Lockheed Aircraft Service, Inc., has been appointed general manager of the Atlantic-European Division of Transocean Airlines. Before joining Lockheed earlier this year, he had been assistant to the executive vice president of Capital Airlines.

John L. Rhodes, formerly director of transportation for Jacksonville Chamber of Commerce, has been appointed director of public relations for Florida Airways.



J. A. Thomas
Assistant to TWA President

J. Koot has been appointed regional representative in Central America for KLM Royal Dutch Airlines. He had been serving as general traffic manager of the company's West Indies Division, and is succeeded in that position by **J. W. L. Garschagen**.

Operations-Maintenance:

John C. Ray, former superintendent of the engine overhaul department of Eastern Air Lines, has been appointed general superintendent of maintenance for the entire system with headquarters in Miami. Ray has been associated with the company for 22 years and is its oldest employee in point of service. He joined the airline's predecessor company, Pitcairn Aviation, Inc., in 1925, and has seen EAL's engine overhaul department expand from 25 men in 1935 to present figure of nearly 300.

James B. Franklin has been promoted from director of maintenance and engineering to the newly created position of director of operations for Capital Airlines. A pilot since 1928 and with Capital since 1934, Franklin has jurisdiction over operations, maintenance and engineering departments of the airline.

Robert J. Gleason, a veteran of 15 years in airline communications work, has been named communications superintendent of Pan American Airways' Latin American Division with headquarters in Miami. He formerly headed PAA communications in the Pacific. He succeeds **DeWitt Greer**, who has been transferred from Miami to New York as superintendent of communications for the Atlantic Division.

Jacques M. Mouries, formerly with Standard Oil Co. of New Jersey, has been appointed station manager for Air France at La Guardia Field, succeeding **Jean Ponsot**, who has been assigned to the executive staff at company's New York offices.

Betty Hasbrouck, stewardess with Western Air Lines since February, 1945, has been named acting regional supervisor of stewardess service for the Inland Division of WAL.

Helenjane Ruth Teeuwen has been named assistant chief stewardess of National Airlines. A member of the Florida Air Pilots, Miss Teeuwen became a stewardess for National a year ago, and prior to that served on charter flights to South America and the Caribbean area.

Traffic and Sales:

John H. Keebler has been promoted to regional traffic manager for National Airlines at Miami after serving as executive assistant to the vice president for traffic. A veteran of 15 years of airline traffic and sales work, Keebler succeeds **William M. Stevens**, who was transferred to Jacksonville as regional traffic manager, replacing **Charles A. Wallace**, resigned. **Eustace L. Adams**, special foreign

assistant to the v.p.-traffic, will handle temporarily the duties of the position vacated by Keebler.

Allan K. Lynar, formerly in office of reservations and ticketing for American Airlines, has been appointed assistant regional manager of reservations and ticket offices in Dallas. With AA since 1939, he has served as reservations supervisor in Dallas and as reservations manager in Nashville.

William B. Caldwell, Jr., has been named to succeed **George P. Dane**, resigned, as manager of tariffs and schedules for National Airlines. Caldwell will continue as head of company's research department and supervisor of statistical department. He has been with NAL since June, 1945.

Ed Riederer, formerly supervisor of schedules, rates and tariffs for Mid-Continent Airlines and prior to that with TWA for 10 years, has been appointed manager of schedules and tariffs for Continental Air Lines.

Richard J. Dina has been named international cargo sales representative for American Airlines in New York. He has been with AA's sales staff since 1940, serving both in Chicago and New York.

Marion Wehrheim, recently appointed Chicago traffic representative for Chicago and Southern Air Lines is the first woman to hold that position with the company. With C & S for five years, Miss Wehrheim has been senior reservations agent in Chicago the past two years.

Robert J. Kochtenthall, traffic representative for Northwest Airlines in New York City, is new president of the Airlines Traffic Club there. The club, composed of airline personnel in charge of sales and promotion, holds monthly meetings to facilitate interchange of ideas.



Robert J. Gleason
PAA Communications Superintendent
AMERICAN AVIATION

John H. Cusack, formerly sales representative for Eastern Air Lines and American Overseas, has been appointed district sales representative in New York for Philippine Air Lines.

James V. Conkey, formerly with Pan American Airways, is in charge of a new district office opened by Air France at 37 S. Wabash Ave., Chicago. He is responsible for passenger and cargo traffic generating from the midwestern states.

Robert L. Ware, district traffic manager of American Overseas Airlines in Stockholm for two years, has been appointed American Airlines' Washington representative for international travel.

Robert Fitzstephens, who was with Douglas Aircraft and Pan American Airways before joining Philippine Air Lines last March, has been appointed sales representative for PAL in Los Angeles.

W. H. Hottel, formerly with TACA and Glenn L. Martin Co., has been named district manager in Mexico City for TWA. Travel agents in Mexico City, Central and South America are being serviced by TWA's Mexico City office.

* * *

Ben O. Howard has relinquished all connections with Douglas Aircraft Co. to devote full time to his new duties as executive assistant to the chairman of the board of Consolidated Vultee. For many years assistant to Donald W. Douglas, Howard at first remained on a part-time basis as a consultant at Douglas when he became identified with the Atlas Corp. in connection with its acquisition of control of Convair.

Ralph G. Lockwood, former chief engineer for Eastern Air Lines and more recently v.p.-operations for the Flying Tiger line, has returned to active duty with the Air Force and has been assigned as assistant deputy chief of staff for supply and maintenance, Air Transport Command, Hickam Field.

Vincent T. Ford has resigned as assistant manager of the West Coast office of the Aircraft Industries Association to take on work in the east. No successor will be named. Committees handled by Ford will be taken over by Capt. Leland D. Webb, West Coast manager.

A. D. Palmer, Jr., director of public relations for the Airplane Division of Curtiss-Wright Corp. during the war and more recently with B. D. Adams & Associates, advertising agency, is now editor and business manager of the *Buffalo Notorist*, publication of The Automobile Club of Buffalo, N. Y.

G. Joseph Minetti has been appointed Commissioner of Marine and Aviation for New York City, succeeding Frederick G. Reinecke, resigned. Minetti has been deputy commissioner.

Forrest Barrett, school and college service representative of United Air Lines in Los Angeles for more than five years, has resigned to become head of merchandising for a wholesale and retail gasoline and oil distributor. Barrett was originator of idea of allowing school teachers credits for educational trips made via commercial airlines.

December 15, 1947

Airline Commentary

By ERIC BRAMLEY

THIS IS the story of how an airline pilot did an outstanding public relations job for his company—one of the most outstanding jobs we've heard of . . . Although the story involves an American Airlines pilot, it came to us from J. H. "Slim" Carmichael, president of Capital Airlines, and Wayne Parrish, our editor, who picked it up from Slim . . . One of American's DC-6's (this was before the grounding) was delayed over an hour at New York before departure for Chicago . . . This led to considerable criticism and griping among the passengers . . . However, about 45 minutes after departure, the captain, H. P. Luna, went back into the cabin and personally handed out copies of a letter he had written . . . We want to quote almost all of this letter, as a masterpiece in keeping passengers informed . . . "You have been delayed and inconvenienced and should be told exactly why this has happened to you," Capt. Luna wrote. "There were two items of the airplane's equipment which were not operating properly. One was the cockpit heat control. If we had not had that repaired, the temperature up front in our 'office' would have approached outside temperature (10 degrees F.). Since we are not clothed for such a rigorous clime, our performance would have suffered . . . The other item was one of our compasses. To have departed with that malfunctioning would have been safe (we have two other compasses) but would have reduced our performance also. And so, you see, you are part of a delayed flight but no factor of safe operation has been compromised. We offer this explanation because we feel that an informed passenger may be temporarily aggravated by an inconvenience, but his good judgment will compel him to recognize a good operation when he sees it. And American Airlines is proud of all phases of its operations . . . Because the normal prevailing westerly winds (which are headwinds on a westbound flight) are calculated to retard our flight by about 15 minutes and because those winds are below normal velocity tonight, we are making up some of our delay" . . . It so happened that Slim Carmichael was one of the passengers on that flight . . . He kept a copy of the letter, had it photostated and distributed to all Capital pilots as an example of how "an intelligent approach changed a rather disagreeable situation into an exceedingly pleasant one" . . . The passengers, Slim said, were "loud in their praise of not only American Airlines but of the captain" . . . We too are loud in our praise . . . Capt. H. P. Luna oughta get a medal . . .

While on the subject of pilots and the flight reports they write to passengers, we note that United Air Lines has put out an interesting release giving some typical examples of these reports . . . It seems that Capt. Robert A. Freeman tunes in news broadcasts and includes news items in his report . . . Capt. Cecil Odell specializes in pointing out historic spots . . . Capt. G. R. Jeffry writes about the Rocky Mountains . . . But the one we like best is Capt. F. J. Joffrian, who lives in La Grange, a suburb of Chicago . . . When bringing trips into Chicago, he frequently writes on his report: "If anyone desires transportation to western suburbs, I have room in my car for four as far as La Grange" . . . That's real service . . .

Yes, friends, there is something new in aviation . . . It comes from way down under in Australia . . . There's an outfit called MacRobertson-Miller Aviation Co. that operates an irregular service between the mainland and Pelsart Island . . . The airplane is the only means of communication between the island and the mainland and this, as you can plainly see, had the company in a quandary because it didn't know when there were passengers on the island who wanted to fly to Perth . . . But the company's Pelsart agent is a smart boy . . . He got himself a few carrier pigeons . . . When somebody wants transportation, he writes a message on a cigarette paper, straps it to the pigeon's leg, and said pigeon delivers the message to the company . . . This isn't exactly a sell-and-record, chartomatic, etc., reservations system, but it seems to be working . . .

We want to take this opportunity to wish all of you a Merry Christmas and a Happy New Year . . . And, as we always do at this time of year, we thank all of you who have given us ideas for this column and sent us stuff during 1947 . . . We hope you keep it up in 1948 . . .

Pioneer* Gyro Flux-Gate* Compass

FOR PINPOINT DIRECTIONAL ACCURACY

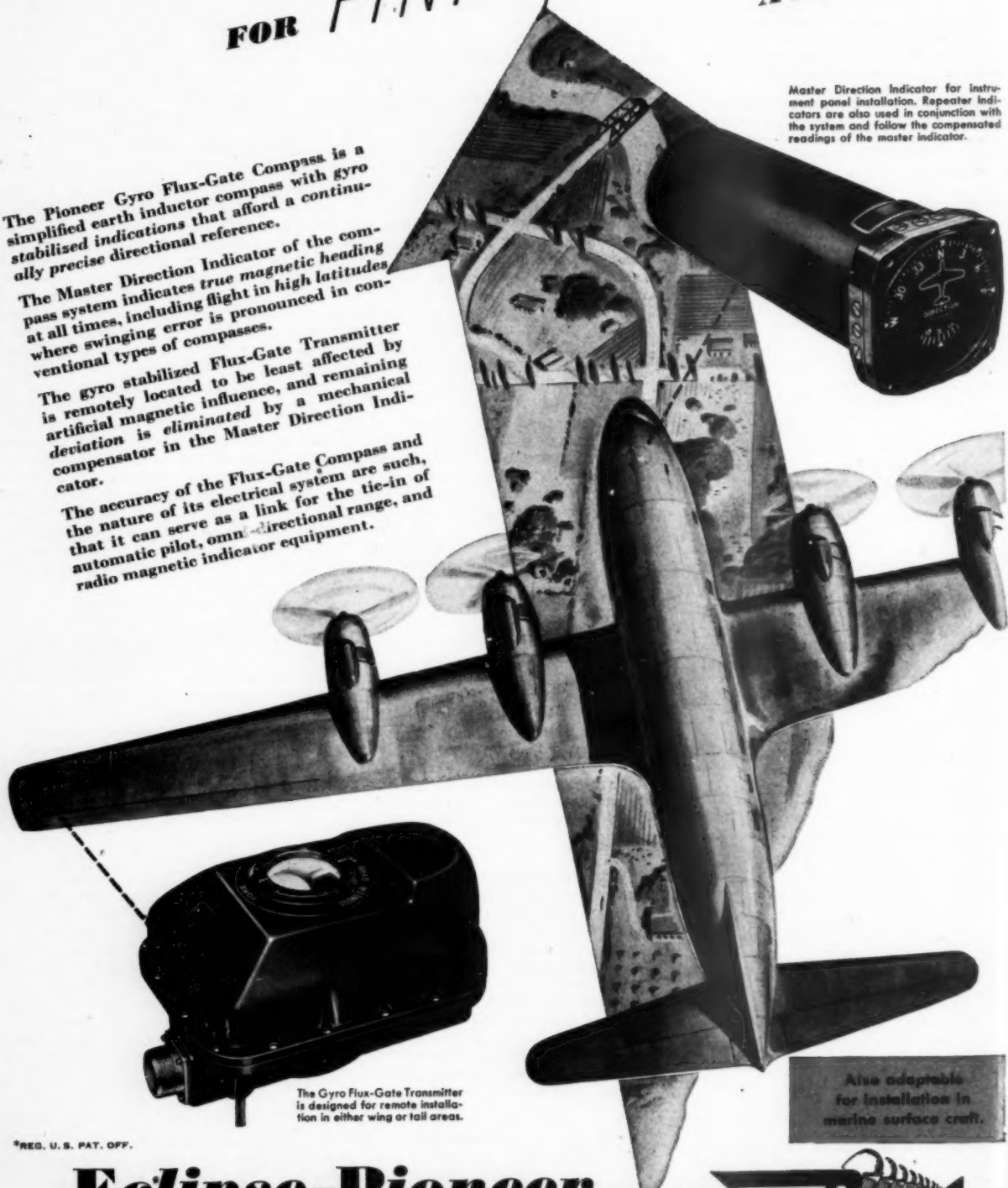
The Pioneer Gyro Flux-Gate Compass is a simplified earth inductor compass with gyro stabilized indications that afford a continually precise directional reference.

The Master Direction Indicator of the compass system indicates true magnetic heading at all times, including flight in high latitudes where swinging error is pronounced in conventional types of compasses.

The gyro stabilized Flux-Gate Transmitter is remotely located to be least affected by artificial magnetic influence, and remaining deviation is eliminated by a mechanical compensator in the Master Direction Indicator.

The accuracy of the Flux-Gate Compass and the nature of its electrical system are such that it can serve as a link for the tie-in of automatic pilot, omnidirectional range, and radio magnetic indicator equipment.

Master Direction Indicator for instrument panel installation. Repeater indicators are also used in conjunction with the system and follow the compensated readings of the master indicator.



The Gyro Flux-Gate Transmitter is designed for remote installation in either wing or tail areas.

Also adaptable for installation in marine surface craft.

*REG. U. S. PAT. OFF.

Eclipse-Pioneer

TETERBORO, NEW JERSEY

DIVISION OF

Bendix
AVIATION CORPORATION

Cargo Plane Requirements Outlined at SAE Meeting

By DAVID SHAW

Despite the fact that freight is now moving by air at the rate of 174,000,000 ton miles a year it still moves only in passenger-type airplanes. Furthermore, in 1946 it accounted for only five percent of all air transportation revenues. On the railroads, freight brings in more than 80 percent of all revenues.

Air freight has achieved an important enough place in our economy to merit its own aircraft and a presentable set of ground facilities, according to a paper on Cargo Aircraft Requirements presented by American Airlines' R. Dixon Speas and John J. Casey at the recent SAE air transport engineering meeting in Kansas City.

"No firm plans exist for introduction of any new cargo plane," Speas and Casey stated, "despite the obvious economic and service advantage and service margins of proposed designs."

On the subject of ground facilities the authors said, "you can buy every commercial cargo ground facility in use in the world today for the price of one passenger station, or for the cost of the profound studies which have been devoted towards our cargo problem."

Casey and Speas devoted their paper to market potentials and industry needs, directing no criticism at either air carriers or aircraft manufacturers for the present situation.

Freight Grows Fastest

They based their 174,000,000 ton mile figure on the September performance of the entire U. S. air freight industry as illustrated in accompanying table. This rate, they estimated, is more than 20 percent greater than the combined ton mile carriage of passengers, mail, express and freight by all U. S. domestic and international carriers in 1940. Furthermore, they showed, air freight has had a much greater rate of growth than other forms of traffic.

Despite the recent growth, present size and anticipated potential of cargo revenues compared with passenger and mail traffic, Speas and Casey stressed that freight operations have received nothing approaching a proportionate attention and investment. They did not recommend a costly and elaborate development program, but simply a sound program "which will provide adequate services at profitable but reasonable rates."

They listed a new cargo aircraft design, and greater operational dependability, as the two primary technical needs of the air freight industry. On the latter point they urged that known all weather flying aids and techniques be applied at once to freight operations in order to provide better service and to improve aircraft utilization to a point where ton mile costs would be reduced considerably.

The authors discussed requirements for new cargo aircraft under the following main headings.

Cargo Densities: Loading density in a passenger DC-4 is only about 2.5 pounds per cubic foot. When the same airplane is converted for cargo the loading density increases to 5.1 pounds per cubic foot. In a railway express car, however, the figure is about 18.8 pounds per cubic foot. As the air freight market has expanded, the average air shipment has tended to become heavier and smaller, indicating future requirements for less space to accommodate a full payload.

Interior Arrangements: Emphasis under this consideration is on space utilization, and the most controversial topic on space is whether or not an aisle should be left for crew passage

during flight. The authors see less need for an aisle than for the efficiency of solid loading. While admitting that fixed bins or adjustable barriers are desirable for operations with numerous stops and excessive loading and unloading, they have several suggestions for solid loading on long hauls with only a few stops.

Cargo Tiedown: Emphasis is given to the lack of standardization in tiedown methods and fittings. Speas and Casey make certain recommendations regarding the location and number of tiedown points. Their preference is for rope and rope nets rather than webbing and patented fittings. They also favor a smooth floor, such as 3/16 inch plywood, with a load capacity of at least 200 pounds per square foot.

Balance Control: Discussion is given to the importance of providing a wide center of gravity movement in new cargo aircraft. Where limits are critical, the use of aerodynamic balancing tabs, V-tabs, or similar devices is recommended for desensitizing center of gravity limitations.

Heating, Ventilating, Refrigeration and Pressurization: The authors point out that while considerable concern has been given to providing uniform temperatures at various ranges, operating experience has shown this problem to be less urgent than was once expected. They estimate that more than 75 percent of anticipated future cargos will not require temperature control. In addition considerable economy can be realized by operating aircraft which are neither heated nor insulated. Temperature

	All-Cargo Aircraft as of Nov. 1, 1947					Total Cargo Carried Sept. 1947
	DC-3	C-46	DC-4	Total	Capacity ⁽¹⁾	Ton Miles ⁽²⁾
SCHEDULED:						
American	3	.....	7	10	151,000	1,768,358
Capital	2	.....	2	4	50,000	357,472
Delta	2	.....	.....	2	12,000	159,252
Eastern	3	.....	.....	3	18,000	470,000 ⁽³⁾
Pan American	.....	.....	5	5	95,000	1,981,756
Trans World	6	.....	2	8	74,000	1,167,494
United	13	.....	3	16	135,000	1,615,000
Western	1	.....	.....	1	6,000	71,103
Scheduled Totals	30	.....	19	49	541,000	7,590,435
NON-SCHEDULED:						
Cal-Eastern	.....	.....	5	5	95,000	1,115,000
Commander	4	.....	2	6	62,000	301,000
Flying Tiger	15	.....	4	19	166,000	800,000
Sante Fe Skyways	3	.....	4	7	94,000	1,542,277
Seaboard & Western	.....	.....	4	4	76,000	167,000
Slick Airways	.....	11	1	12	147,700	2,034,411
Passenger aircraft of other airlines	.....	.....	.....	.....	.....	956,424
Non-scheduled Totals	22	11	20	53	640,700	6,916,112
GRAND TOTALS	52	11	39	102	1,181,700	14,506,547

1 Cargo capacities based on weight, space limitations and operation practices are:

52 DC-3 6,000 lbs.	312,000
11 C-46 11,700 lbs. (10,200 over Rockies, 12,200 East of Rockies)	128,700
39 DC-4 19,000 lbs.	741,000

Does not include cargo bin capacity of passenger planes.

1,181,700

2 Does not include Mail. Includes cargo carried on passenger aircraft.

3 Based on actual express and estimated air freight.

control will be necessary however, for such items as frozen foods in which a large potential market is seen.

Loading and Unloading: Two major problems are listed; the level of the cargo compartment floor above the ground, and the number and location of access doors. The authors recommend that cargo aircraft be developed for loading at truck-bed level to minimize the need for specialized loading equipment. The size of the present DC-4 cargo door is indicated as satisfactory since it has been found that only a fraction of one percent of all loads require a larger door.

Personnel Training: The objective of this item is efficiency and safety. It is estimated that a crew properly trained in loading, unloading and stowage can reduce cargo handling costs as much as 75 per cent over a green crew. Flight personnel as well as ground crews are urged to be thoroughly familiar with all problems peculiar to cargo operations.

Utilization: Evidence is offered to show that utilization of the aircraft regardless of payload can be less profitable than infrequent trips with a substantial profit on each trip. A chart is included to show that depreciation cost is the only item among operating costs which decreases directly with the number of hours flown. Emphasis is placed on a well-balanced operation in which all supporting activities are geared to the number of hours flown.

Automatic Traffic Control System Held Essential

A fully automatic traffic control system for high speed aircraft is necessary before substantial progress in all weather flying can be made, according to ATA vice president Milton W. Arnold.

The system must be automatic, Arnold stressed, because human endurance and ability already is taxed during peak traffic periods or bad weather conditions. It must be fast, he added, because more airplanes moving at higher speeds can only be brought straight in without stacking or holding.

Addressing the recent air transport engineering meeting of the Society of Automotive Engineers, Arnold said that "commercial aircraft flying at 600 m.p.h. can be expected in the order of ten years' time."

He listed more and longer runways, better servicing facilities, improved weather forecasting and numerous other factors as important, but none so urgent as the problem of automatic spacing in three dimensions from takeoff to landing. Instructions and communications, Arnold said, should be automatic and language free.

Both the pilot and the area con-



Military 2-0-2—A Martin 2-0-2 transport, stripped of seats, upholstery and similar commercial fittings, has been flown to Wright Field for demonstration to Air Force officers. It can carry 40 completely equipped combat troops, or up to 11,000 pounds of cargo. As a hospital plane, it can accommodate 36 litter patients and four attendants. Plans for a military version design, with payload of 5½ tons and gross weight of 39,900 pounds, were announced last spring.

troller, according to Arnold's presentation, should receive continuous visual information on the exact position of the plane concerned and all other aircraft in the area. This is necessary not only for safe separation but to permit speeding or slowing the airplane for punctual arrival in assigned approach position.

Arnold pointed out how aids already developed, such as ILS, GCA and scanning radar, and omni-range navigation, could be fitted into the necessary control system. He suggested a combination of flow control based on advance scheduling, and block signals to insure safe spacing as the best approach to airway traffic handling.

The major problem to be solved, and the one farthest from solution, Arnold said, lies in taking a number of parallel lanes of traffic moving at different speeds and funneling them into landing position among other lanes of traffic converging on the same area from other directions.

"Unless an effective attack is started at once," he concluded, "we may soon possess an adequate navigation system without the means to utilize it effectively."

Willis Appointed by Lear

Appointment of Willis Air Service, Inc., of Teterboro, N. J., as distributing organization for Lear Radio, Inc., in the metropolitan New York area, has been announced.

Convair Liner Gets ATC For 1,975 Horsepower

The Civil Aeronautics Administration has issued approved type certificate No. 793 to the Convair-Liner, Ben O. Howard, executive assistant to the chairman of the board of Consolidated Vultee Aircraft Corporation, announced Dec. 1.

The certificate covered the operation of the Convair-Liner at 1,975 maximum engine horsepower. This is one of several versions of the plane with varying power plants, propellers and configurations which Convair expects to certificate.

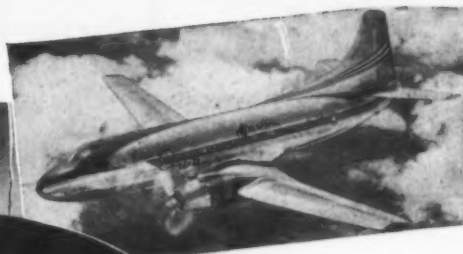
Approval of supercharging of the cabin and anti-icing features was not asked since Convair is making further improvements designed to improve the operation and extend the service life of these items.

AAA Grounds Beechcrafts

Following an accident Dec. 6 near Wellsburg, W. Va., with a Beechcraft D-18C, All American Aviation voluntarily grounded its two remaining aircraft of that type pending investigation.

An All American official said ground observers had reported there was apparently a structural failure in the tail assembly. A mail pickup had been made at Wellsburg, but the company was convinced the accident was not connected with the pickup. The pilot and flight mechanic were killed. Service will continue on all routes with Stinsons.

AMERICAN AVIATION



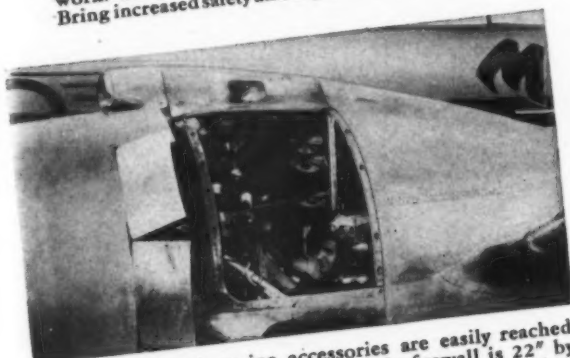
World's leading twin-engine airliner, the Martin 2-0-2, features provisions for low-cost maintenance.



Easy to "Get At"..



Even the Martin 2-0-2's fuel cells are easily and quickly installed or removed. Tough, flexible Mareng fuel cells, an exclusive feature of the Martin 2-0-2, eliminate excessive riveting, intricate corner assemblies and troublesome metal work. Keep fuel cell maintenance costs at a minimum. Bring increased safety and dependability to the Martin 2-0-2.



Power plant and engine accessories are easily reached through large access doors. Hatch in firewall is 22" by 24"—large enough to admit a man's head and shoulders—and gives access to hydraulic reservoir, accumulators, —and gives access to main electric disconnects and rear of instrument panel. Side opening facilitates major maintenance—saves time, cuts costs.

One hundred twenty servicing and maintenance access provisions. That's what makes the Martin 2-0-2 so easy to "get at." Conveniently located throughout the 2-0-2, numerous doors and hatches facilitate routine service and major overhauls . . . expedite non-scheduled repairs. Main illustration shows accesses to the prime maintenance compartments in the under-floor section of the fuselage. Each compartment contains a major maintenance location with accessories grouped according to class. Each is illuminated by built-in flood lights. Each is conveniently reached from ground-standing position. These and other built-in, time-saving features bring new, low-cost maintenance to airlines operating Martin 2-0-2's.

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C & S Introduces New Visual Flight Control System

A visual flight control system which provides the senior flight superintendent and his assistants with an up-to-the-minute picture of operations has been introduced by Chicago and Southern Air Lines and results have been found highly satisfactory.

Based on the principle that anything visual is easier to understand than anything that is not, the system is built around a flight control board conceived and developed by J. A. Young, C & S operations manager.

Divided into two sections, each corresponding to one of the company's basic routes (Chicago-New Orleans and Houston-Detroit), the board is manned by two assistant flight superintendents, working under the direction of a senior flight superintendent.

Each section of the board consists of a series of staggered slots or channels, each of which runs the entire length of the board. Into these slots are placed small, movable metal bins containing all pertinent information about the flight, including the trip number, aircraft number, cards for each crew member, the flight plan, all teletype and radio messages pertinent to the flight, and a flight operations report listing the complete crew, originating point, departure and arrival times, number of passengers, total load, specific route to be flown, amount of gas on board, and brief remarks concerning irregularities, if any.

Keeps Track of Flights

The bin is placed into the slot at the point of origination of the flight, and is moved as each message reporting a new position is received, an operation which continues until the flight reaches its destination. A colored tab attached to the bin informs the flight superintendent when a flight is running late, with different colors indicating different degrees of lateness.

At the termination of the flight, the bin is broken down, with the aircraft number card going into a special bin under the terminal point, and the crew members' individual cards going into another bin. During extended periods of bad weather this enables flight superintendents to assign crews in proper rotation.

Major advantage of the board, according to C & S, is that it frees the senior flight superintendent for more detailed study of the weather and other impending flight conditions which are his primary concern, with

his assistants handling routine details.

"Net result," according to Young, "is that Chicago and Southern can now plan its flight operations firmly from four to six hours in advance and tell passengers exactly what we are going to do."

Pioneer Progresses Toward Complete Instrument Approval

Pioneer Air Lines is moving toward its goal of complete instrument operating authority, with radio beacon installations recently completed or about to be completed at the five Texas cities on its system which have been without radio aids to navigation.

Removal by CAA of one radio beacon from Harpersville to Mineral Wells airport was completed recently, and a beacon at Bryan Army Air Field has been reactivated for the benefit of all users of the airport, including Pioneer.

In addition, the airline, through the Interdepartmental Radio Activities Committee, last month purchased new Western Electric 10-watt non-directional radio beacons for installation at the airports of Sweetwater, Temple and Plainview.

Pioneer has been granted the frequency of 287 kilocycles for operation of the new company-owned beacons and has assumed full responsibility for their maintenance.

MCA Doubles Hangar Space At Wold-Chamberlain Airport

Mid-Continent Airlines has embarked on an expansion program in the Minneapolis-St. Paul area, with the taking over of the Naval Research Hangar at Wold-Chamberlain Airport as the initial step.

The former Navy hangar, with 39,400 ft. of floor space, will house MCA's air-frame overhaul, engineering and radio overhaul departments and more than doubles the company's capacity for maintenance and overhaul of its fleet, which at present consists of 15 DC-3's.

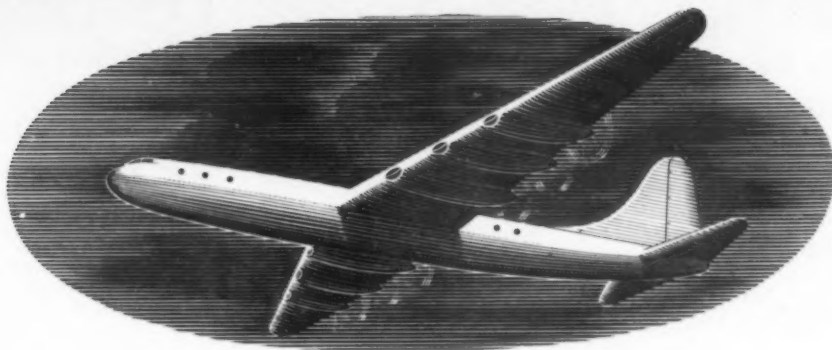
MCA occupied its original Wold-Chamberlain maintenance base in January, 1942, under a 20-year lease. This building contains 34,375 sq. ft. of floor space, of which 18,400 is devoted to overhaul. MCA personnel in Twin Cities now total approximately 325, with 240 in maintenance and overhaul.

CAB Issues Official Report On WAL's California Accident

Official findings of the Civil Aeronautics Board state the probable cause of Western Air Lines' DC-3 accident near Lebec, Calif., Nov. 13, 1946, to have been "the action of the pilots in making an instrument letdown without previously establishing a positive radio fix. . . . This action was aggravated by conditions of severe static, wind in excess of anticipated velocities, preoccupation with an unusual amount of radio conversation, and the inoperative Newhall radio range." Board found that although Newhall radio was inoperative, "adequate facilities were available for instrument flight from Las Vegas to Burbank."



LAS Eastern Base—Finishing of a 60,000 sq. ft. hangar (on the right above) has completed current expansion at the Lockheed Aircraft Service maintenance and overhaul base, MacArthur Airport, Sayville, L. I. The overall installation occupies more than 350,000 sq. ft. Constellations of Air France, LAV, KLM, and Airlinte Eireann, and C-54's of Seaboard & Western and the Air Transport Command were in work when above picture was taken.



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AiResearch oil temperature regulators, as well as intercoolers, are famed for their sound, rugged construction. *There has never been a reported failure of AiResearch mechanical joint construction in service.*

EASY TO SERVICE

AiResearch thermostatic control valves on oil temperature regulators are the *only kind* that are adjustable after installation. Similarly, the AiResearch mechanical-joint aluminum cooler is the *only one* in which tube repairs in the field can be made without sacrifice of operating efficiency.

AIRESEARCH — THE PIONEER

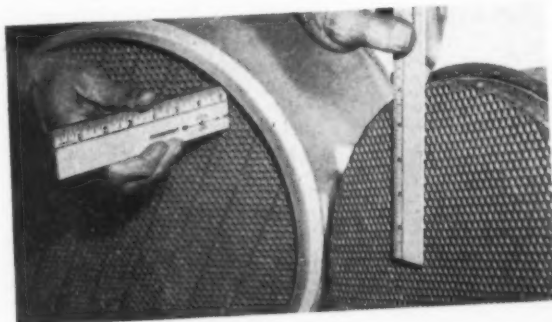
AiResearch was *first* to produce the thermostatically controlled oil cooler shutter, *first* to perfect the elliptical oil cooler, *first* with surge protection, *first* with electric flap control, *first* to build a standard Army-Navy four port valve.

Today, AiResearch is supplying heat transfer equipment for more than 20 domestic airlines and 25 foreign airlines, with more to be added when the Boeing 377 and Convair 240 enter service. All told, some 11 commercial and 17 Army and Navy aircraft types, including jet, are using AiResearch heat transfer equipment.

The reservoir of specialized research and skill in precision manufacture at AiResearch is available to aid you in solving your problems. Write: AiResearch Manufacturing Company, Los Angeles, California.

NEW COOLER 14% ABOVE A N SPECIFICATIONS

Newly designed AiResearch oil cooler (right in photo) is outstanding because of its low drag characteristics and exceptional cooling efficiency at high speeds. Flush header construction and other improvements provide 3000 square inches more cooling surface in a 13" cooler than was previously possible.



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Rounding out a vast network of superlative air service throughout Europe, the Middle East and Africa, SABENA's new sleeper service forges another great link in international communications.

SABENA's fleet new DC-6's manned by veteran crews now are at the service of America. All the advantages that SABENA's extra margin of experience provides are yours . . . the reassuring dependability backed by more than 197 million passenger miles flown. World travelers prefer SABENA.

Direct flights twice weekly from La Guardia Field to Brussels . . . and SABENA connecting service to principal European cities, Cairo, the Belgian Congo and Johannesburg. Fly SABENA all the way. Fare: New York-Brussels, \$349; Round Trip, \$629.90. No tax. Berth Fares (each way): Lower, 1 or 2 persons, \$130; Upper, one person, \$115. Sit-up seats available. Return reservations assured.

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The Extra Margin of Experience*

Planes to Form Radio Relay Chain Across Atlantic

International airliners will form their own chain of flying radio relay stations across the North Atlantic beginning Dec. 15 for an experimental period of six months, under plans drafted in Montreal by a technical working group of the International Air Transport Association.

The relay system will operate on very high frequency (VHF) radio band during periods when normal high frequency (HF) transmission is interrupted by magnetic disturbances. It is expected to help increase regularity of service.

Plans for the VHF relay were completed in Montreal by the communications working group of the IATA Technical Committee, made up of airline experts, which has been studying improvement of the high standard of communications service on the North Atlantic in the light of the last year's experience.

Beginning at one minute after midnight on Dec. 15 crew members of scheduled airliners over the North Atlantic will maintain a constant watch on VHF frequencies to intercept messages and pass them on during periods of HF blackout. They will also notify each other of any changes from the flight plan.

Technicians of the world airline organization estimate that there are normally enough IATA member planes in the air over the ocean at any given time to form a complete relay chain. In the event there are not, weather ships stationed on the North Atlantic will be asked to fill in.

6th Weather Ship in Operation Along North Atlantic Route

The number of ocean weather ships in operation along the paths of air routes across the North Atlantic was increased to six a fortnight ago with the opening of Weather Station BAKER several hundred miles east of the Labrador Coast.

The new station, which will be maintained jointly by the United States and Canada, is a Canadian Navy frigate, St. Stephen. Of five other weather stations in operation in the North Atlantic, two are maintained by the United States, two by the United Kingdom, and one by Belgium and the Netherlands jointly.

Thirteen such stations were agreed upon last year by member airlines of the International Civil Aviation Organization who fly the North Atlantic, but yet to be put in operation are five of those allotted to the U. S., one allotted to France and one allotted to Norway, Sweden and the U. K. jointly.

AMERICAN AVIATION

30 Hour Check

By DAVID SHAW

HERB FISHER, who engages in flight research as well as sales and service for Curtiss-Wright's Propeller Division, recently took up a DC-4 equipped with reversible propellers to see what would happen if the propellers were reversed in flight.

At 12,000 feet, cruising at around 150 m.p.h., Herb did some experimenting with one and two engines to satisfy himself that nothing would come apart. Nothing did, so he reversed all four props simultaneously.

What happened? Herb simply lost a lot of altitude in a hurry. He did not lose control of the airplane, and nothing came unglued.

He found, in fact, that it was easier to keep the airplane under control with all four of them reversed than with only one, or two on the same side, in reverse. He found that the latter tends to produce an uncontrollable turning moment toward the reversed props.

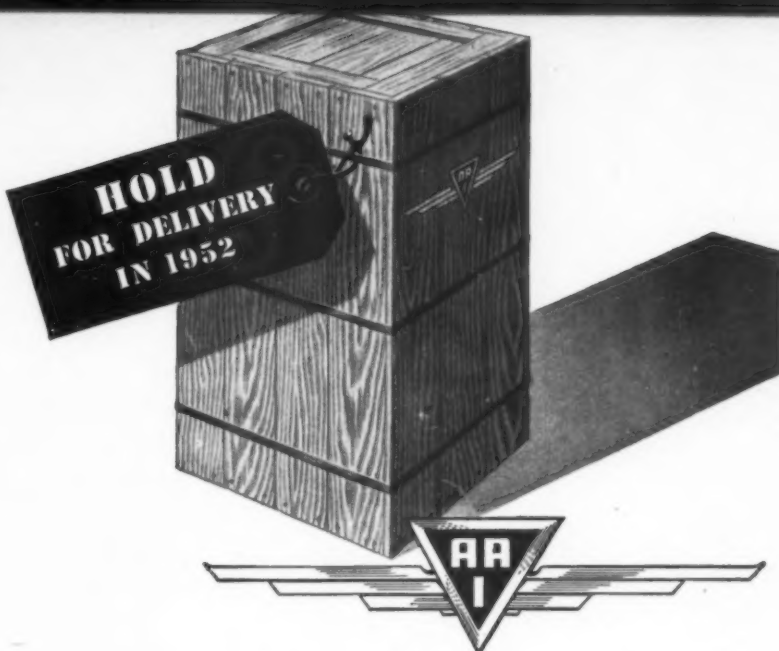
His recommendation in the case of accidental reversing of a propeller in flight is not to try to work it through to normal pitch but first to reverse the opposite propeller. With braking action thus balanced the pilot can devote himself to the propeller trouble without having to fight the airplane.

One of the first CAA airworthiness directives on the new Martin 2-0-2 will be a service note regarding the inspection of Stewart-Warner 921-B heaters. Header plates on the downstream end of cabin header combustion chambers are to be inspected every 30 hours, with 60 hours set for the same inspection on wing headers. Headers are to be removed for inspection and pressure tests after 300 hours for cabin headers and 600 hours for wing headers. The latter inspection is to be repeated every 100 hours after the first 300-hour cabin header inspection, and every 200 hours after the first wing header 600-hour inspection.

It has always distressed us to walk through airline shops and observe how few people are actually taking something apart or putting it back together, compared to the number who are milling around, going for tools or parts, talking over a problem or otherwise looking like they are not producing anything.

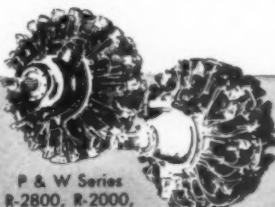
It cheered us greatly the other day to visit TWA's big overhaul base in Kansas City, Kansas. Instead of looking for people who were really working, we had a hard time spotting anyone who wasn't. Not only on the main floor, but all through the engine, propeller, instrument and other shops the place was a beehive of efficiency. Everyone seemed to have a clearly defined job to do, the equipment to do it with, and the urge to get it done.

TWA credits the whole thing to a combination of scheduling, discipline, and selection of people who enjoy turning out a day's work. In an era of big payrolls and low output it was a cheering sight.



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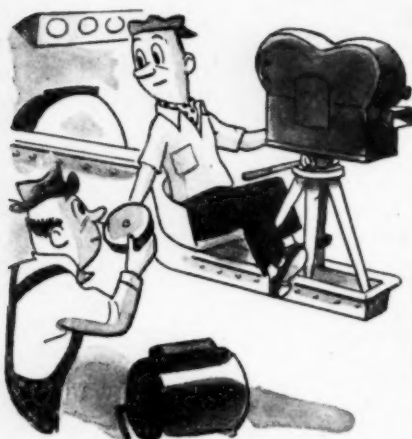
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THE SCHEDULED AIRLINES OF THE UNITED STATES

Miami to Become PAA Main Engine Overhaul Center

Utilizing buildings of the former Miami Air Depot adjoining International Airport, Pan American Airways has disclosed plans for making Miami the main engine overhaul center for its entire system.

The proposed shops, occupying five buildings with a total area of about 1,150,000 square feet, would be the largest of their kind in the world, it is claimed.

Pan Am's present engine overhaul work is divided between Miami, Idlewild Airport at New York, and the Pratt & Whitney aircraft engine plant at Hartford, Conn. Concentration of all this work at one point—Miami—would offer numerous advantages, according to company studies.

The new overhaul center, when completed, would employ an additional 750 skilled workers, boosting PAA employment in Miami, its Latin American headquarters, to nearly 5,000 persons. The payroll increase would be about \$3 millions.

Stratocruiser Approved For 147,000 Pounds Gross

Boeing Aircraft has reported that the structure of the Stratocruiser has been approved for a gross weight of 147,000 pounds and that CAA has approved basic structural engineering and static test information on the airplane. Fifty-five are now in production.

Approval of the basic structure for 147,000 pounds will allow continued development of the craft for the next 10 or more years, Boeing officials said. They pointed out that as more powerful engines become available the present 135,000 pound gross weight can be safely increased without any change in major structure of wings, fuselage or landing gear.

Boeing has delivered nine military counterparts of the Stratocruiser, the Air Force C-97 Stratofreighters, and now has two commercial Stratocruisers undergoing a flight test program.

PIA Centers Flight Control Office at Washington National

Peruvian International Airways has made Washington, D. C., the central flight control office, with the recent transfer of all operations, flight and maintenance personnel from Miami.

Now located at National Airport are: R. S. Mitchell, v.p. operations; Edmund S. Ryder, director of maintenance; Vernon Cunningham, director of engineering and supply; Charles Dunham, IV, director of passenger service; Leeman J. Hipson, chief pilot, and W. Dickson Markey, superintendent of flight dispatch.

AMERICAN AVIATION

SAFETY SLANTS

THE announcement that Aero Insurance Underwriters is withdrawing from the aviation insurance field is a setback for aviation safety. Jerry Lederer's engineering group has served the industry well, distributing many extremely interesting booklets on flying safety slanted to the average operator. The "Aero News Letter" fairly bristled with safety tips and hints. The field engineers have been most helpful to the many operators they have serviced. The proposal in the currently circulated proposed CAA safety release requiring a smoke mask for aircraft crews was first made in an engineering letter from Aero.

The National Fire Protection Association is preparing a revision of its standards for "Aircraft Hangar Construction and Fire Protection." George Tryon, staff aviation expert of the association would be glad to have any ideas you may have on the subject which you feel should be included in such standards. You may address George at the NFPA Headquarters, 60 Batterymarch Street, Boston, Mass.

The NFPA would be interested also in getting any fire reports that you may have information about. The association acts as a clearing house for this information and naturally wants to have its statistics as complete as possible. You can help.

Twice within a month recently one airline operator experienced premature engine starts during periodic checks. Both occurred at the same base. In each instance the engine was being "inched" thru with the starter, while engine stands were in place at the ship. Prop wells were open in the stands. In the first case the engine started and revved up to about 1600 rpm. A mechanic in the cockpit reached up quickly and checked the ignition switch. It moved a fraction of an inch before falling into the full "OFF" detent. Only a visual check had been made of the switches and the switch appeared O.K. although actually it was not. No injuries—no damage.

A few weeks later under similar conditions an engine started and ran up to full take off power. The plane crept forward, with the prop chewing its way through the stand. Two of the four men on the stand were seriously injured as they jumped off. A mechanic working in the cabin ran forward and cut the throttle. Investigation showed that the ignition plug had been removed from its receptacle and placed in the grounding receptacle. One of the magneto grounds on the grounding receptacle was defective allowing the engine to start. A check of the grounding receptacles on the other engines of the same plane showed another open circuit.

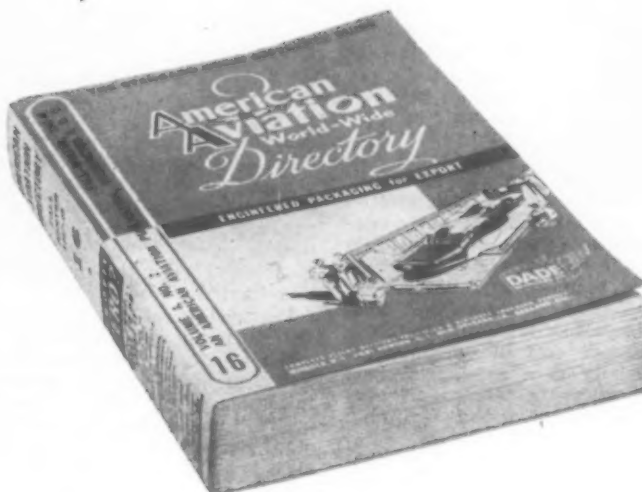
As a result of these incidents, procedures have been established requiring that engine checks requiring the prop to be pulled through are done without engine stands in place. A manual as well as a visual check of ignition switches is required and all grounding receptacles are checked regularly.

December 15, 1947

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New Equipment

'Guardian' Tower Light

Moisture and excessive heat, usually the cause of burned out lamps, are said to be almost entirely elim-



inated by features incorporated in a new "Guardian" tower light manufactured by Hughey & Phillips, 326 No. La-Cienega Blvd., Los Angeles.

A patented ventilator dome with specially designed air vents provides means of escape for heat generated by two 500-watt lamps within the beacon. As the hot air escapes, a suction is created that brings in cool air from the outside and substantially lowers temperatures within the beacon. Tests have shown that lamp life is increased from 15 to 200% and since the cost of climbing the tower usually is a substantial part of maintenance, the "Guardian" beacon is claimed to reflect favorably in overall operational cost.

The construction of the air vents is such that water cannot enter the beacon even in the most severe rainstorms. Condensation resulting from changes of temperature within the beacon is dissipated by means of a concave base which has a drainage port at the bottom. A concealed hinge with recessed neoprene gasket eliminates the possibility of dirt or moisture entering. Finally, the frequency of color screen breakage, usually caused by the uneven expansion and contraction between the glass color screens and encircling metal holders, is reduced by spun glass shielding, which insures equal reaction to heat and cold through glass-to-glass contact.

New LF Direction Finder

A new low frequency direction finder for aviation use as a fixed ground installation has been developed by Standard Electric Argentina, of Buenos Aires, an associate of International Telephone and Telegraph Corp.

The equipment, now undergoing field tests, consists of an antenna system, a goniometer, a receiver and a receiver power supply. The goniometer is an independent unit and supplies the required bearing information by means of a graduated dial with two indicating needles at 90 degrees with each other, an arrangement which in connection with the

central antenna permits simple "sense" operation.

The receiver, in an 11-tube superheterodyne, receives continuous wave and amplitude modulated continuous wave telegraphy and telephony. The equipment has a power output of 1.5 watts and an output impedance of 8 and 500 ohms.

New Type Taxi-Way Marker Light Tested by CAA

A new type of taxi-way marker light for large airports is now being tested at CAA's Indianapolis Experimental Station and is attracting the attention of pilots and airport engineers.

Easy visibility, low electric current consumption and low maintenance costs are among the advantages claimed for the new light, which has a "cold light" gaseous tube mounted to give a V-shaped directional indication to pilots, with the apex of the V pointing to the centerline of the taxi-way.

Mounted in pairs on each side of the taxi-way the V-shaped lights make it easy to keep planes in the center of the strip and to avoid confusion on turns. The lights have a bright blue fluorescent color and are more efficient optically than the blue flush type of taxi lights. CAA says an entire airport taxi-way lighting system can be operated 12 hours on about 30c worth of electricity.



Ice Grip Tread—Tire designer John Antonson shows the steel coils that are laced into the tread of new B. F. Goodrich aircraft tires to give it "biting power" for traction on icebound runways. Such special purpose tires on military transports are expected to ease the problem of keeping U. S. northern air bases supplied through the winter months.

Flight Engineer Ground Trainer Developed by LAS

Training for Constellation flight engineers comparable to that provided for pilots in a Link trainer is now possible through use of an automatic flight engineer ground trainer



Ground trainer for flight engineers.

developed by Lockheed Aircraft Service, Inc., at its Burbank, Calif., maintenance base.

Believed to be the first ground trainer to use actual electrically-operated instruments from an airplane, the trainer simulates all actual flight conditions except motion.

Use of the trainer is said to reduce materially the flight time—usually 50 to 100 hours—required to train a flight engineer. Lockheed provides free ground training for one flight engineer with the purchase of each Constellation, and charges for the training of additional flight engineers have been established at approximately \$1.00 per hour, which is about the cost of conducting the training. Courses are of six weeks duration for experienced flight engineers and 12 weeks for inexperienced personnel.

To date, Lockheed Aircraft Service has trained more than 240 Constellation flight engineers for 10 airlines, including TWA, Eastern, American Overseas, BOAC, KLM Royal Dutch Airlines and Air France.

Aircraft Fire Warning Device Demonstrated by Stratos Corp.

A warning device that automatically tells the pilot and flight crew when a fire hazard is created by failure of the oil seal of a high altitude cabin supercharger unit was demonstrated last month to technical representatives of the airlines, manufacturers, the Navy and CAA.

The device was developed by The Stratos Corp., Farmingdale, N. Y., a subsidiary of Fairchild Engine and Airplane Corp.

AMERICAN AVIATION

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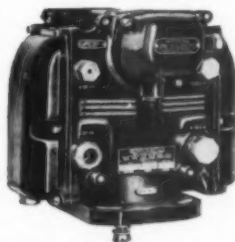
At the instant you read this, there are planes taking off, coming in for landings, and logging hour after hour of dependable flight—all with Bendix-Scintilla Ignition Equipment adding to their reliability. In temperature and weather extremes of all kinds, in

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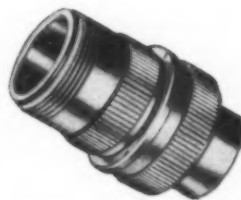
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The Birdmen's Perch

By *Major Al Williams, ALIAS, "TATTERED WING TIPS,"*
Gulf Aviation Products Manager, Gulf Bldg., Pittsburgh 30, Pa.



A fellow was talking to us the other day.

Like a lot of fellows who talk to us, his problem was "getting into aviation."

Said he'd always wanted to, but never got the breaks. The Army, for instance, had put him in the Infantry instead of the Air Force where he wanted to go, etc.

We were pretty rough on him.

We told him there were a lot of good aviation jobs empty right now and scores of aviation schools crying for more G.I. students.

We told him to spend less time dreaming and reading sky books and more time getting enrolled in an aviation school and really getting to work.

We hope he did.

We hope you will, too, if you've a problem like his.

ABOUT "BLANK'S FLYING SERVICE"

Last month we poked around a lot of small fixed-based operations.

We were downright flabbergasted at the ingenuity, good sense and efficiency of these lads.

They claim they have to display all these qualities to stay in business.

And it was mighty sweet to see how many of those hard-headed operators swear by Gulfpride Oil.

Some of them didn't seem to know much about how oils were refined and some of them didn't know that, in addition to ordinary refining, Gulfpride got an extra refining step—the Alchor Process.

It was news to some of them that this



Alchor Process got extra of the unstable hydrocarbons out of Gulfpride Oil.

But while many of them understood little about the details of refining, every one of them agreed that on the job—in their engines—Gulfpride Oil gave them more downright lubrication per quart or per dollar!

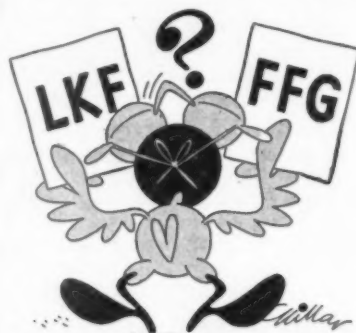
LITTLE KNOWN FACTS DEPT.

The Little Known Facts Dept. is going to be without Little Known Facts this month.

As you know, for several years now we've been running these Little Known Facts about Well Known Planes. Contributors who sent in facts—with proof—which we've used have been commissioned Perch Pilots (bottom rung) and Senior Perch Pilots.

Question: Shall we continue the LKF Dept.?

Or would you rather have a "Favorite



Flying Gripes" Dept. or some other dept.?

It's your page, what do you want to do with it?

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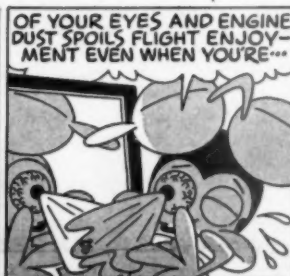
(A post card at least.)

Meanwhile keep sending your Little Known Facts to the address above.

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GULF AVIATION PRODUCTS



EAL Streamlines Passenger Handling to Cut Delays

New passenger loading procedures designed to simplify travel by air and to eliminate a frequent cause of flight delays have been put into effect by Eastern Air Lines at the 78 route points on its system.

Announcement of the new procedures was made by Capt. Eddie Rickenbacker, president of the company, at conclusion of an extended program of research and tests conducted under supervision of EAL traffic, sales and reservations officials.

The new procedures include these features:

Passengers traveling without baggage are no longer required to check in at the field ticket counter, as formerly, but need only arrive at the airport in time to board their flight when its departure is announced. Passengers with baggage still must have their baggage checked to their destination at city or field ticket counter.

A minimum of information is requested of travelers, thus eliminating much of the questioning and "paper work" formerly required.

A passenger planning on making connections with another EAL flight is no longer required to check in at a ticket counter at the connecting point, but merely deplanes and awaits announcement of the continuing flight's departure. His baggage is automatically transferred.

Flight numbers with destinations and positions of the plane on the boarding ramp are now announced over the public address system, and after the second announcement the flight departs. Formerly, missing or tardy passengers were frequently paged by name, a time-consuming practice that usually resulted in delayed departures.

NWA Studies 'Electronic Brain' For Speeding Reservations

An "electronic brain" said to be capable of providing a "yes" or "no" answer to an airline seat request in one-fifth of a second is being studied by Northwest Airlines reservations and engineering executives with the view of possibly adopting it for use on the company's entire domestic system.

R. P. Brinkley, NWA director of reservations, described the push-button device as "the most remarkable development of its kind ever

Westward Trend

An increasing trend toward vacations on the West Coast—and particularly in California—is indicated in a survey made for TWA by five national magazines and other agencies.

The survey, which will be a factor used by TWA traffic men in planning the airline's 1948 schedules, showed that one out of every five U. S. vacationists in the next 12 months will be attracted to the West Coast, and that they will spend more than \$1 billion on their vacation trips.

The poll also showed that the largest percentage of U. S. vacationers to foreign lands come from California, with Europe and the Mediterranean as favored destinations. TWA pointed out that a journey to Europe by air can be made in less time than is required for a trip from the West Coast to Chicago by ground transportation.

offered as a time saver for air travelers." It was said by NWA to involve application of "a radar principle developed during the war."

Essentially, the electronic brain consists of a magnetized metal drum which would accept electronic impulses flashed from cities all over an airline's system requesting seats. The drum is said to be capable of storing complete information on seats available on every flight for 30 days.

It would work this way: A reservations agent in city A would press a button, flashing his request to city H, and another flash on the drum would return in one-fifth of a second with an affirmative or negative answer.

When three or four space requests reach the "brain" simultaneously, it would store the requests in the order of transmission and then handle them one at a time.

Brinkley said the "electronic brain" is ready for production but would be fairly expensive. Scientists are working, he said, to bring its cost down to a practical range.

PAA Cuts Sleeper Fare

Pan American Airways will reduce non-stop sleeper rate between New York and London from \$125 to \$100 effective Jan. 10. The tariff is in addition to regular fare of \$325.

11 Domestic Airlines Drop 'No Show' Penalty Charge

Ten domestic scheduled airlines within the past 30 days have dropped the 25% "no show" penalty, and at least one other carrier—Northwest—was slated to drop the penalty this month.

The Air Transport Association said the "no show" assessment had served its purpose during the airline equipment shortage of last year, when many travelers requested reservations with several carriers in the hope of getting space on just one of them, and then neglected to cancel reservations obtained but not used.

Braniff, Capital, Challenger, Northeast, Southwest, and TWA suspended the penalty on Nov. 15, followed by Mid-Continent on Dec. 1 and United, Western and Inland on Dec. 12. American Airlines had dropped the penalty last spring because of the "bad psychological effect" on air travelers. Most carriers agreed that their experience with the penalty was far from satisfactory.

Still retaining the provision were eight scheduled carriers: C & S, Colonial, Delta, Eastern, Empire, Florida, Monarch, and National.

Parker Named President Of Air Traffic Conference

Laigh C. Parker, v. p. in charge of traffic for Delta Airlines, has been elected president for 1948 of the Air Traffic Conference of America, consisting of chief traffic executives of all scheduled U. S. airlines. Other officers elected: Harold Cray, v. p. in charge of traffic and sales for United Air Lines, as first v. p., and Hugh Coburn, v. p. in charge of traffic for Mid-Continent Airlines, as second v. p. M. F. Redfern continues as executive secretary.

The members adopted a new set of by-laws which has the effect of consolidating the conference organization into the legislative body to deal with all matters relating to traffic, sales, advertising and promotion in the airline industry. This would replace the organizational set-up of the past two years during which time Conference has consisted of the assembly of traffic executives, the passenger traffic section and the cargo traffic section.

TWA Offers Radio Telegraph Service on International Flights

TWA has inaugurated radio telegraph service for passengers on international flights between the U. S. and Paris and Lisbon. All messages are handled by TWA aircraft in flight and by coastal stations of the Mackay Radio Telegraph Co. on the ground, unless the sender specifies RCA.

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New Services

Mid-Continent Airlines has resumed service to Ottumwa, Iowa, where service was discontinued in 1943 because of the war. Service by MCA into Waterloo, Ia., is scheduled for Jan. 1, and Quincy, Ill., will be added to the company's system as soon as telephone facilities are available.

Capital Airlines is scheduled to inaugurate service into Toledo, Ohio, on Jan. 7 under a certificate granted the company in a recent CAB decision.

TWA has inaugurated service to two new route points—Wilmington, Del., and Allentown-Bethlehem, Pa. Wilmington is served by two westbound and two eastbound flights daily, and a like number of flights serve Allentown-Bethlehem.

Eastern Air Lines has inaugurated service into Charleston, W. Va., with two flights daily on the Boston-New York-Washington-Louisville-St. Louis route, and two flights daily on the Detroit-Cleveland-Jacksonville-Miami route.

International

Peruvian International Airways has increased its New York-Lima schedules to three flights a week, with flights leaving New York at 2 p.m. and Washington at 4:10 p.m. every Tuesday, Thursday and Saturday. The Tuesday and Saturday flights continue beyond Lima to Santiago.

AOA has added a new service between Stockholm and Frankfurt, via Copenhagen. Company's revised winter flight schedules provide daily service to London, Shannon and Frankfurt; three flights weekly to Amsterdam, Stockholm, Helsinki and Reykjavik; two flights weekly to Glasgow, Berlin and Copenhagen, and one flight weekly to Oslo.

TWA is now serving Madrid and Lisbon with four flights weekly, three of them continuing on to other international points. The fourth is a new weekly turn-around flight added to accommodate the heavy volume of traffic between the U. S. and Spain and Portugal.

KLM Royal Dutch Airlines has started twice-weekly Amsterdam-South American service, with Saturday flights operating via Lisbon, Dakar, Natal, Rio de Janeiro and Montevideo, and Tuesday flights via Rome and Casablanca.

C & S Offers New Winter Air Cruises to Cuba

Three new winter season all-expense air cruises designed to suit the budget and time limitations of midwestern vacationists have been announced by Chicago and Southern Air Lines. In addition, the airline's original all-expense Havana Air Cruise will remain in effect at revised winter rates.

Two of the tours feature trips to both Havana and Varadero Beach, Cuba, with air transportation to and from the latter point via the Cuban airline, Aerovias "Q." The third tour features a stay at the internationally-known Nacional Hotel (European plan) in Havana.

AMERICAN AVIATION

Good Baggage Record

Northwest Airlines has reported an unusually good record in handling passengers' luggage during 1947. According to J. B. Watschke, supervisor of the lost and found section, only five of more than 770,000 bags handled by NWA during the first 11 months of this year were lost. Losses thus were in the ratio of 0.6 out of every 100,000 bags, well under the reported 3.7 ratio for the entire airline industry in this country.

Hertz Automobile Service Available to UAL Passengers

An agreement under which passengers traveling via United Air Lines may wire ahead and arrange for use of an automobile at their destination has been signed between UAL and the Hertz Drive-Yourself System.

The agreement covers more than 50 cities on United's system, and permits passengers either to have the automobile delivered to the airport or to pick it up themselves at a Hertz office. Similar agreements had been signed previously by Northeast Airlines and by Southwest Airways.

Pan American Boosts Fares Between U. S. and Honolulu

Pan American Airways has filed a new tariff with CAB increasing its fares between San Francisco-Los Angeles and Honolulu, effective Dec. 12. New one-way fare is \$150, round-trip \$270, plus Federal tax. Former fares were \$135 one-way and \$243 round-trip. Sharply rising operating costs necessitated the increase, PAA said.

Rates and Tariffs

Eastern Air Lines has introduced a new reduced 90-day round-trip excursion fare of \$180 between 13 eastern cities and San Juan, Puerto Rico. Benefitting from the new fare are New York, Newark, Philadelphia, Baltimore, Washington, Atlantic City, Richmond and Danville, Va., and Greensboro-High Point, Winston-Salem and Raleigh-Durham, N. C.

United Air Lines has filed with CAB a new schedule of air express rates, effective Dec. 12, reducing by more than 50% present rates on candy, fresh flowers, fresh pineapples, nursery stock and newspapers imported from the Hawaiian Islands, and on newspapers and magazines shipped from the U. S. to Honolulu.

Pan American Airways, effective Dec. 15, will inaugurate a special round-trip excursion rate of \$30 between Miami and Havana and between Miami and Nassau. The new low rates, valid in either direction, carry a 30-day return limit. Its Alaska Division has reduced rates on volume shipments of air express from Seattle to Fairbanks, Nome, Juneau and Ketchikan.

December 15, 1947

THE AMERICAN UNIVERSITY

School of Social Sciences
and Public Affairs

1901 F St., N. W. Washington 6, D. C.

SECOND ANNUAL AIR TRANSPORTATION INSTITUTE

January 7 through January 30, 1948

Held for present and prospective executives in all fields of aviation and air transport throughout the nation—in cooperation with Civil Aeronautics Administration and Air Transport Association of America.

Fifty outstanding air transport leaders such as James M. Landis, CAB Chairman, Emory T. Nunnely, General Counsel, and L. Welch Pogue, former chairman, CAB; Theodore P. Wright, Administrator, CAA; Robert Ramspeck, Executive Vice President, ATA; H. F. Law, Superintendent, New York Airports; H. W. Nourse, Vice President, United Airlines will discuss vital problems in three week full time Institute. Field trips to airports, plane production and repair facilities. Approved by Veterans Administration under Public Law 346.

For information and room reservation, write or phone Professor L. M. Homberger, The American University, 1901 F St. N. W., Washington, 6, D. C. Metropolitan 0258.

FINAL REGISTRATION DECEMBER 30

OFFERED FOR IMMEDIATE SALE

One (1) Douglas DC-3

(Not A Converted C-47)

A complete airline airplane in every detail fitted in a most luxurious manner. Cabin trim is beige wool lining, green velvet carpeting, and genuine maroon leather. Deluxe rest-room and buffet. Twenty-one quickly removable passenger chairs make it an ideal executive airplane as divans, table, etc. could be interchanged in a matter of minutes. Low airframe and engine time. 1830-92 engines.

Extra equipment includes: Radio Altimeter, Glide Path, Two A.D.F.'s with Dual Azimuth Dial, V.H.F. and a 10 Channel Transmitter.

Total Sale Price \$50,000.00

Additional equipment — Prices on Request

1 Complete set of new EDO Amphibious floats for DC-3

LOS ANGELES AIR SERVICE

5900 AVION DRIVE

Los Angeles Airport

Los Angeles 45, Calif.

Phone ORchard 7-9194

U. S. Domestic Airline Revenues-Expenses, Quarter Ending Sept. 30

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NONSCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
All American	\$ 223,192	\$	\$ 218,443	\$ 4,108	\$	\$	\$	\$ 277,540	\$ 156,129	\$ 121,411	\$ -54,349
American	22,690,046	20,467,063	732,096	456,046	649,752	239,086	77,282	20,579,433	9,068,804	11,510,629	2,110,613
Brantiff	3,063,408	2,779,168	112,833	78,495	26,299	25,874	33,334	3,131,723	1,483,601	1,648,122	-68,315
Capital-PCA	5,430,626	4,106,490	911,508	140,853	140,808	21,385	41,401	5,194,131	2,420,995	2,773,136	236,495
Caribbean	119,430	94,772	17,872	. . . .	3,457	738	1,100	150,307	61,461	88,846	-30,877
C & S	1,894,732	1,540,759	233,409	60,140	30,120	16,387	5,894	1,927,580	812,474	1,115,106	-32,848
Colonial	Report not yet available; Data will be included at a later date.										
Continental	1,151,519	942,027	158,351	9,679	8,824	10,442	4,793	1,139,647	489,290	650,357	11,872
Delta	2,813,577	2,566,877	104,195	58,465	52,434	25,605	1,759	2,915,189	1,352,328	1,562,861	-101,612
Eastern	11,800,942	10,739,151	348,337	313,188	157,185	156,595	2,504	12,347,747	6,466,423	5,881,324	-546,805
Hawaiian	973,914	802,236	4,685	26,287	82,158	26,850	31,487	801,936	328,244	473,691	171,978
Inland	648,385	483,749	151,001	4,639	3,012	4,104	. . . .	538,234	255,036	283,259	110,091
NCA	1,645,296	1,362,982	245,017	17,274	8,070	9,736	1,526	1,335,251	488,237	847,015	390,868
National	2,046,644	1,892,850	56,298	25,287	15,494	42,258	3,857	2,642,786	1,315,474	1,327,306	-594,136
Northeast	1,360,917	1,144,497	171,599	16,917	6,378	5,848	1,075	1,464,340	679,643	784,704	-103,430
Northwest	6,070,986	5,526,762	300,237	141,648	37,065	45,632	11,319	6,697,994	2,294,081	2,403,913	1,372,992
TWA	14,223,296	12,537,263	735,554	464,980	257,114	138,491	45,934	13,924,929	5,987,939	7,936,990	298,367
United	21,435,080	19,181,009	896,184	615,246	498,562	191,029	15,722	19,181,651	8,568,409	10,613,242	2,253,429
Western	3,130,263	2,686,687	29,157	25,962	21,112	26,065	. . . .	2,816,631	1,252,968	1,563,663	313,633
TOTALS	100,724,077	88,854,422	5,635,720	2,462,409	2,002,694	980,572	305,052	95,067,110	43,281,536	51,785,575	5,656,966

* Under CAB filing procedures, the airlines file a cumulative quarterly financial report for July-September in place of a separate statement for the month of September. Traffic data, however, are reported separately for each month.

U.S. Internat'l Airline Revenues-Expenses, Quarter Ending Sept. 30

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	U. S. MAIL REVENUES	FOREIGN MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NONSCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
American	\$ 987,649	\$ 820,151	\$ 11,982	\$ 8,076	\$	\$ 96,074	\$ 20,286	\$	\$ 990,436	\$ 515,594	\$ 474,842	\$ -2,787
Amer. O'Seas	6,803,292	5,872,150	304,015	110,888	265,039	93,174	3,820	. . . .	6,640,289	3,400,511	3,239,778	163,303
C & S	239,391	123,785	112,580	. . . .	. . . .	1,358	1,629	. . . .	243,722	114,652	129,070	-4,332
Colonial	Report not yet available; Data will be included at a later date.											
Eastern	253,103	237,862	2,999	. . . .	. . . .	8,899	3,473	. . . .	293,347	164,225	129,121	-40,263
National	172,914	150,024	1,028	. . . .	16,783	. . . .	5,083	. . . .	209,648	77,677	131,971	-36,734
Northwest	2,402,558	1,076,922	990,076	41,812	7,286	37,083	15,795	239,380	2,484,181	1,128,770	1,355,411	-81,623
Pan American	15,754,258	11,598,189	612,102**	527,146	1,951,658	. . . .	519,199	472,973	14,923,247	6,546,453	8,376,794	831,011
Latin Amer.	9,513,530	8,332,126	40,040**	344,366	517,482	. . . .	146,836	111,889	9,715,479	4,570,862	5,144,597	-831,948
Atlantic	6,589,493	4,083,975	1,990,167**	45,781	517,194	. . . .	21,755	7,540	6,758,460	3,943,522	2,814,967	-168,997
Pacific	1,192,912	1,141,238	-9,359**	. . . .	41,584	. . . .	13,216	3,578	1,175,866	746,257	709,548	-82,894
Alaska	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
TWA	9,227,172	7,176,488	458,917	580,227	580,373	. . . .	220,838	118,104	8,316,622	3,540,044	4,776,579	910,550
United	1,072,496	1,014,255	26,967	. . . .	18,387	. . . .	12,851	. . . .	818,954	381,194	437,760	253,543
TOTALS	54,209,068	41,427,164	4,541,420	1,658,296	3,915,786	143,374	1,104,135	976,684	52,870,221	25,149,741	27,720,478	1,338,049

* Under CAB filing procedures, the airlines file a cumulative quarterly financial report for July-September in place of a separate statement for the month of September. Traffic data, however, are reported separately for each month.

** Estimated.

NOTE: Data in above tabulations were compiled by American Aviation Publications from monthly reports filed by the airlines with the Civil Aeronautics Board. Figures for American Airlines include that carrier's service to Mexico but not to Canada; for C & S to Havana; for Colonial to Bermuda; for Eastern to Puerto Rico; National to Havana; Northwest to Alaska; and United to Canada. Operations of U.S. carriers into Canada are included in domestic reports to CAB, in accordance with CAB filing procedures.

Summary of U. S. Feederline Traffic for September

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MILES	EXPRESS TON-MILES	FREIGHT TON-MILES	TOTAL REV. TRAFFIC TON-MILES	AVAILABLE TON-MILES	% AVAILABLE TON-MILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
Challenger	1,973	491,000	1,848,000	26.6%	2,202	1,206	367	53,191	196,368	27.1%	87,998	93,900	93.7%
Empire	1,348	292,000	754,000	38.7%	1,100	292	. . . .	25,687	60,701	42.3%	75,605	77,280	97.6%
Florida	690	87,000	510,000	17.1%	352	111	. . . .	7,705	55,824	13.8%	63,799	67,800	94.1%
Monarch	3,062	723,000	2,546,000	28.4%	1,749	1,281	8,115	83,702	223,839	37.4%	144,933	145,800	97.1%
Pioneer	7,233	1,850,000	5,356,000	34.5%	3,345	1,792	1,082	168,976	643,647	38.1%	223,288	223,520	99.9%
Southwest	11,211	2,085,000	4,486,000	46.5%	3,211	4,122	1,954	218,701	601,228	36.4%	217,338	219,462	98.5%
West Coast	5,279	787,000	2,153,000	36.6%	1,101	690	. . . .	70,627	215,600	32.0%	101,187	110,392	91.7%
TOTALS	31,796	6,315,000	17,653,000	35.8%	13,060	9,414	11,518	628,589	1,797,207	34.9%	911,148	938,154	96.9%

AIR MAIL BY HELICOPTER

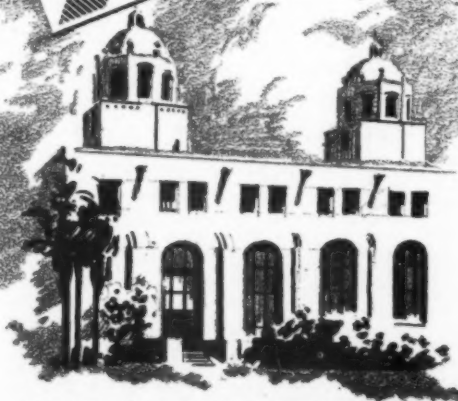
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A.M. 84



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The world's first officially certificated helicopter air mail routes are now in daily operation in the Los Angeles area.

Los Angeles Airways, Inc. is flying a shuttle run and two circle routes between major post offices in the city and its suburban municipalities. Operating with dependable Sikorsky S-51's, they are speeding air mail delivery time by as much as 24 hours.

The remarkable flying characteristics and rugged serviceability of the S-51's are available to other leaders planning improved transportation for any community anywhere.

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BRIDGEPORT, CONNECTICUT

ONE OF THE FOUR DIVISIONS OF UNITED AIRCRAFT CORPORATION

Depreciation Cuts Deeply Into Air Carrier Revenues

The high cost of today's high-speed, multi-engined aircraft, and the relatively brief service expectancy of such planes, are combining to make depreciation one of the costliest items on airline expense sheets, according to an *American Aviation* survey.

This survey covered depreciation charges of the scheduled domestic carriers for the first nine months of this year, as compared with the same period in 1945, and showed that these charges increased nearly 300%—293%, to be exact—in the two-year period following the end of the war.

Total depreciation charged by the 18 major domestic airlines during the first three quarters of this year amounted to \$32,035,953, as compared with like charges of \$8,102,983 in the same nine months of 1945. The total dollar increase was \$23,932,970.

All but \$2.9 millions of the increase was charged up to flight equipment depreciation, which rose from \$6,457,952 in the 1945 survey period to \$27,499,586 in the same nine months of this year. American Airlines alone reported a \$5 million increase in this single item of expense over the two-year period.

This sharp increase was due, of course, to extensive purchases by the airlines of DC-4's, mostly recon-verted military surplus, shortly after the war ended, followed by purchases of L-49 Constellations in 1946

and of new type Constellations and DC-6's this year.

In the case of the DC-4's, purchase and conversion costs amounted to from \$200,000 to \$250,000 in most cases, and depreciation charges were high because it was deemed advisable to depreciate this equipment in three to five years. As to the Con-nies, which cost upwards of \$750,000, and the DC-6's, which cost about \$600,000, most carriers using these planes are writing off their cost over periods ranging from five to ten years, which still tends to make the monthly depreciation somewhat costly.

Ground equipment depreciation of the 18 carriers increased only from \$1,645,030 in the 1945 nine-months period to \$4,536,366 for the same three quarters of this year, this being due to the fact that construction of new ground installations has not been so urgent as the acquisition of new equipment and to the further fact that ground equipment can be depreciated over a longer period of years than can flight equipment.

The \$23.9 million increase in depreciation charges, almost equaled the difference between the \$16.3 million net profit the domestic carriers earned in the first nine months of 1945 and the \$10.9 million loss showing on their books at the end of the third quarter of this year.

CAL Expects '47 Profit Under New Mail Rate

Retroactive mail pay totaling approximately \$511,000 will accrue to Continental Air Lines under rates set in a Civil Aeronautics Board show-cause order and accepted by the carrier.

Robert F. Six, Continental president, indicated that the increased mail earnings should put the company in the profit column for calendar 1947.

Continental's new rates, which are retroactive to Dec. 1, 1946, provide compensation at a maximum rate of 28.5c per airplane mile at a 50% passenger load factor, decreasing to a minimum of 7.5c per plane mile at an 85% or higher passenger load factor.

Pay will be figured on a base designated mileage of 15,100 miles per day and computed on standard capacities of 21 seats for DC-3 equipment and 40 seats for the Convair Liner, which Continental hopes to put into service next year. Pioneer Air Lines, Texas regional carrier, is the only other certificated airline with a sliding-scale mail rate.

The retroactive provision of the new rate will boost Continental's mail pay for the period from Dec. 1, 1946, through Oct. 31, 1947, to approximately \$1,084,000, slightly more than 23c per revenue plane mile flown.

Mid-Continent 10-Month Profit Totals \$115,260

An October net profit of \$27,657, as compared to \$16,127 for the same month of 1946, brought Mid-Continent Airlines' net profit, after taxes, for the first 10 months of this year to \$115,260.

Operating revenues of \$562,849 were up 25% from October of last year, while operating expenses advanced only 23%. However, more revenue passenger miles were flown this October than last, and the cost per mile showed a slight decrease.

Load factor on traffic of 27,333 revenue passengers was 62.89%, as compared with a load factor of 70.10% on the 23,760 revenue passengers flown by MCA in October, 1946. Cargo ton-miles more than doubled this October as compared with last—64,106 as against 31,413.

Delta Loses \$310,249 In 1947 Fiscal Year

Delta Air Lines reported a net loss of \$310,249 for the year ending June 30, after accruing \$1,072,782 as depreciation and taking advantage of \$178,708 as a tax carry-back credit.

Operating expenses for the year were \$11,910,492 as compared with \$7,226,843 in the previous fiscal year. Passenger revenues increased from \$6,953,945 in 1946 to an all-time high of \$10,558,559.

Depreciation Charges of Domestic Airlines

(First nine months of 1947, compared with same period of 1945)

Carrier	1945		1947		Total \$ Increase
	Flight Equipment	Ground Equipment	Flight Equipment	Ground Equipment	
American	\$ 942,891	\$ 380,197	\$ 5,935,401	\$1,090,647	\$ 5,702,959
Braniff	270,108	66,475	1,078,427	119,885	861,729
Capital	399,775	86,183	1,531,808	225,886	1,271,736
Caribbean	925	3,810	36,256	6,442	37,964
C & S	157,171	34,043	630,567	77,214	516,567
Colonial	71,149	12,359	327,423*	21,778*	265,694
Continental	107,251	39,461	314,408	72,614	240,310
Delta	226,547	34,842	705,700	96,568	540,880
Eastern	469,215	96,795	3,328,696	354,235	3,116,922
Hawaiian	89,927	36,218	155,154	63,820	92,830
Inland	75,590	9,289	156,998	15,369	87,490
Mid-Continent	198,650	25,064	257,895	40,892	75,073
National	166,076	38,950	971,973	104,621	871,588
Northeast	94,249	25,414	576,529	67,493	524,359
Northwest	373,096	146,075	2,765,773	485,165	2,731,767
TWA	1,166,197	222,203	2,878,641	590,610	2,070,851
United	1,382,655	347,999	4,673,442	959,208	3,901,996
Western	266,478	39,651	1,174,484	153,912	1,022,266
Totals	\$6,457,952	\$1,645,030	\$27,499,586	\$4,536,366	\$23,932,970

* First 8 months; September data not available.

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- Douglas DC-3 Airplane Parts, Accessories and Ground Equipment
- Wright G-102 (C9GB) Engine Parts, Accessories and Components
- P&W R-1830-92 Engine Parts, Accessories and Components

ALSO

- Douglas DC-4 Airplane Parts and Accessories
- P&W R-2000-13 Engine Parts, Accessories and Components (many of which are interchangeable with R-2000-7-9-11 Engines).

These inventories are available for inspection at our warehouses at Astoria, L. I., New York, Tulsa, Oklahoma and Fort Worth, Texas, and offered F.O.B. these points for domestic shipment at very attractive prices.

Prompt attention will be given to all requests for quotations directed to the attention of the Superintendent of Stores at the above address.

Classified Advertising

The rates for advertising in this section are as follows: "Help Wanted," "Positions Wanted," "Aircraft Wanted or For Sale," and all other classifications \$1.00 a line, minimum charge \$4.00. Estimate bold face heads 30 letters and spaces per line; light body face 40 per line; box numbers add two lines. Terms, cash with order. Forms close 20 days preceding publication date. Rates for display advertisements upon request. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1317 F Street N. W., Washington 4, D. C.

HELP WANTED

AERONAUTICAL ENGINEERS: Structural Engineers, Aerodynamicists, and Layout Engineers having at least four years aircraft experience in addition to college degree are urgently needed by large eastern manufacturer. Consideration will also be given to aircraft engineers interested in all phases of design and test engineering. In letter of application please give detailed account of your aircraft experience as well as other pertinent data you feel will assist us in fully and promptly considering your application. All replies will be held strictly confidential. Apply Employment Manager, Fairchild Aircraft, Hagerstown, Maryland.

EQUIPMENT FOR SALE

Airline Officials—here is an important announcement by Charles A. Zweng; Pan-American Navigation Service is now releasing War Surplus stocks as follows: Bausch & Lomb Sextants (like new) \$49.75. A-10-A (new) at \$75.00; or A-10-A reconditioned at \$17.50; New Aperiodic D-12 Magnetic Compasses \$24.50; Hamilton Master Navigation Watch (new) \$67.00; Elkin Stop Watches (new) \$12.75; Astro Compasses with case (new) \$12.75; F-8 Aerial Cameras (new) \$175.00. This beautiful equipment will soon be gone forever. (Free folder). Pan-American Navigation Service, 12021-Div. 6W., Ventura Blvd., N. Hollywood, California.

POSITIONS WANTED

Airline pilot, 31, currently flying first pilot DC-4's with major domestic airline, B.A. and Master Bus. Admin. degrees, one and one-half years experience in South America, desires a position offering return to S. A. Box No. 591, American Aviation, 1317 F St., N. W., Washington 4, D. C.

ADMINISTRATIVE POSITION, age 34, married, 9 yrs. experience airline operations and traffic in positions of responsibility. Experience encompasses operations of domestic, international and feederline carriers. Have sound, common sense ideas about air transportation which can be valuable to your airline. Box No. 596, American Aviation, 1317 F St., N. W., Washington 4, D. C.

AIRLINE PILOT, 34 yrs. old, desires position in labor relations, personnel, sales or as foreign representative. Have piloted on most foreign and Alaska routes. Available at once.

Box No. 595, American Aviation, 1317 F St., N. W., Washington 4, D. C.

EQUIPMENT WANTED

WANTED: C-54's preferably A's and B's. Cargo or passenger. State hours, general condition and lowest cash price. Box No. 597, American Aviation, 1317 F St., N. W., Washington 4, D. C.

MEAT SUPPLIES WILL BE SCARCE . . . beyond February First . . . buy now while meat animals and poultry are being liquidated.

We offer ten Walkin low temperature refrigerators; cold rolled steel outer and inner shell; six inch spun glass insulation; equipped with Carrier compressors; 3 HP. 3 Phase motors, built in sections; designed to maintain zero temperature; can be turned lower. Two sizes 9' x 12' x 7' 6" and 12' x 10' x 7' 6". Capacity of latter 950 cubic feet of refrigerated space. Priced \$2250.00 and \$2705.00 f.o.b. Garden City, Kansas.

Contact: J. LEE MERRION, U. S. Yards, Chicago 9, Ill.
YARDS 2727.

WORLD'S PREMIER AIRPLANE FABRIC

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Fabric and Tapes for the
Aircraft Industry.

FLIGHTEX FABRIC

Export Representative
AVIQUIPO, Inc.
25 Beaver Street, N. Y.
Cable Add.: 'Aviquipo'

Wings of Yesterday

25 Years Ago

A lateral pressure equalizer invented by Grover C. Loening was proved successful.

For the first time in history more than 1,000 persons crossed the English Channel by air in one week.

The Instone Air Line which pioneered the London-Brussels air line was given the privilege of operating to Cologne with an ultimate extension to Prague and later India.

10 Years Ago

(IN AMERICAN AVIATION)

Continental Air Lines transferred its main headquarters from El Paso, Tex., to Denver, Colo. (Dec. 15, 1937)

The Post Office Dept. put into effect Dec. 1, 1937 general reductions in air mail postage on letters and articles addressed to points in Central and South America and the West Indies. (Dec. 15, 1937)

Nation-wide air express shipments during October 1937 totaled 67,673, an all-time high for any one month since the service was started. The October figure represented a 20% increase over total of 56,324 shipments

handled during October 1936. (Dec. 15, 1937)

Star Air Lines, Inc., a newly formed company, announced the purchase of Star Airways, the largest operating commercial airline in Alaska. (Dec. 15, 1937)

Letters

Rules of 'Hoopskirt Era'

To the Editor:

The need for simplifying Customs and Immigration procedures for International air travellers is being stressed again and again by the antiquated actions of these government departments when handling international passengers. The over-officious attitude of Customs and Immigration personnel not only makes for ill-will amongst the foreign travellers themselves, but also is responsible for the chief feature of air travel, speed, to be greatly nullified.

As an example: two westbound Trans-Atlantic flights recently landed at Moncton, New Brunswick, due to, in the first case, bad weather in Newfoundland and in the second instance, mechanical difficulties. Onboard the first airliner were several passengers bound for Western Canada and one for Halifax, Nova Scotia, only 112 miles away. These people originally held space on a Canadian airline from Gander, Newfoundland to Canada, and despite the fact that this airline could have flown them to their Canadian destinations from Moncton, they were forced to reboard the Trans-Atlantic airliner and proceed on to New York, hundreds of miles out of their way. The second Overseas flight mentioned was extensively delayed due to an engine change. Again, the Customs and Immigration officials refused to allow the

passengers to proceed on to their destinations via connecting airlines.

Obviously, if the airplane is ever to become the major mode of International travel, these hoopskirt era rules and regulations must be modified to meet the needs of today's world. It is hoped that ICAO and IATA will do the utmost possible to relieve this bungling situation.

(NAME WITHHELD BY REQUEST)

Books

FLIGHT ENGINEERS MANUAL, by Charles A. Zweng. Pan-American Navigation Service, 12021 Ventura Blvd., North Hollywood, Calif. 416 pp. \$4.00.

This new addition to the "Zweng" aviation series is designed to aid candidates for CAA Flight Engineer Certificates prepare for the written half of their examination. The eleven chapters cover various phases of the flight engineer's work and responsibilities, such as loading and balance, cruise control, Civil Air Regulations, aircraft and engine operation and maintenance, fuel consumption. A particularly useful chapter includes in condensed form pertinent formulas commonly used by the flight engineer.

Excerpts from operations manuals of the Lockheed Constellation, Douglas DC-4, and Boeing Stratoliner are given for review purposes. An appendix contains 240 multiple choice questions with answers, giving the reader a thorough review of all important material.

Booklets

"The Air Transportation Industry", 66-page booklet offering occupational guidance, has been authored by Stuart G. Tipton, general counsel of the Air Transport Association. It is available as No. 15 in the American Industries monograph series for \$2.00 from the Bellman Publishing Co., Inc., 83 Newbury St., Boston 16, Mass.

Factual information includes data on personal qualifications required for air transport occupations; scholastic training needed; analysis of employment opportunities; remunerations received; chances for advancement; statement of advantages and disadvantages. The booklet provides a brief history of the development of air transport, including air mail, passenger services, air express and freight.

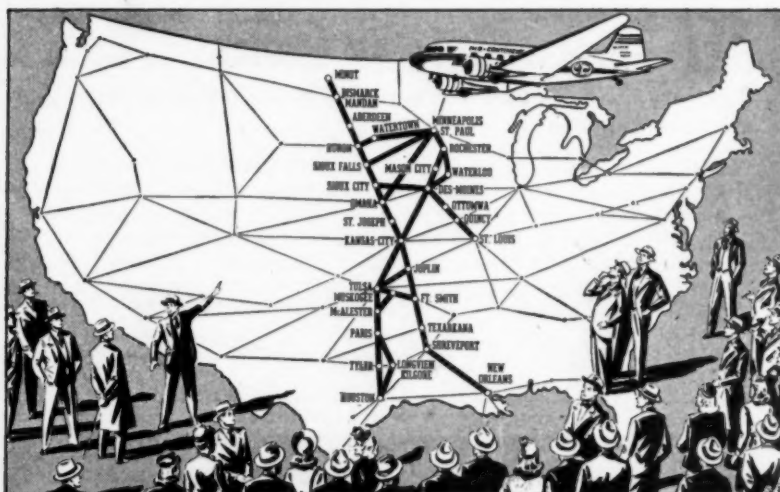
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"Skyways of the Pacific" by Weldon B. Gibson has been issued as No. 27 in the American Institute of Pacific Relations series of popular pamphlets on the Far East. The booklet tells the story of the development of the trans-Pacific air routes and discusses the aviation facilities possessed by the nations bordering on the Pacific. The author outlines the important role of aviation in future political, cultural and economic developments in the Far East, now that Nanking and San Francisco are closer to each other in time than Chungking and Shanghai were a few years ago. Available for 25c at 1 East 54th Street, New York 22, N. Y.

Alfred Marchev Dies

Alfred J. Marchev, 51, president of Aircraft Screw Products Co., Long Island City, and former president and later board chairman of Republic Aviation Corp., died at his Garden City, L. I. home. Death was caused by a heart ailment.

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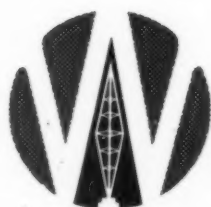
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